State, U.S. Lawmakers Pushing To Hinder Offshore Outsourcing

Issue could be a hot topic in next year's presidential election

BY PATRICK THIRODEAU Federal and state lawmakers are accelerating efforts to stem offshore outsourcing. chiefly by setting restrictions on the use of foreign labor in

enverament contracting At the same time, the issue is drawing attention in the presidential race. For instance, Sen, John Kerry (D-Mass). who's seeking the Democratic nomination, introduced legislation last month requiring

call center employees to dis close their location at the commencement of each call When introducing the legislation. Kerry cited a Gartner Inc. estimate that one in 20 FT jobs at user companies will move offshore by the end of

There are at least nine bills rending in the U.S. Congress aimed at barring foreign workers from government contracts, and four states -North Carolina, New Jersey, Michigan and Indiana - are considering similar legislation, according to a study of pending bills assembled by Offshore none life

next were

Users Worry About 'Zero-Day' Attacks, Try to Secure Systems

System configuration rules, incident-response plans may reduce threat

BY JAIKUMAR YLIAYAN

So-called zero-day attacks that take advantage of software vulnerabilities for which there are no available fixes are starting to be viewed as a major

manager at the InfoSec 2002 conference here last week. More than ever the threat of such attacks underscores the need for companies to set and then require the use of safe-configuration policies for the packaged software and

conference attendees said. They also stressed the importance of having well-developed patching and incidentresponse capabilities to belo

minimize the havoc that at-Zero-Day, page 16

the leadest critics The issue has grown in urgency thanks to the Help. America Vote Act of 2002 Compress' attempt to forestall a repeat of the infamous Florida election debacle of 2000. The bill, known as HAVA. makes as much as \$3.8 billion in funding available to states

BY ELIZABETH HEICHLER

computer scientists are among

Criticism of Electronic Voting Machines' Security Is Mounting Equipment malfunctions, vulnerable systems stall efforts to supplant old polling methods

in the short term for replacing As the presidential primary older punch card and lever scuson approaches, a debate is election equipment - reforms raging about electronic votino that must be implemented by

Innuary 2006. Manufacturers of the latest generation of electronic touch-screen voting devices, known as direct recording electronic machines, are poised to reap the rewards of the spending spree. But contraversy rolls over whether DREs are secure and bug-free Incidents of electronic votine machine malfunctions

have facled the fire, as have thorough security reviews of DREs that have been commisslamed recently by election officials in various states. Those periows found high-risk sulnerabilities in the systems sold by Diebold Inc. Election Systems & Software Inc., Sequola Voting Systems Inc. and Hart InterCivic Inc.

For its part, Hart viewed Compaware Corp.'s review of its system on behalf of the E-voting, page 53



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The dawn of a new PC era.

For the last decade, every processor chip in every personal computer in the world has been based on 32-bit architecture. It was the best technology we had. Until today. Introducing the revolutionary PowerPC G5 processor, the

> Before now, a chip this formidable could only be found in the world's fastest servers and supercomputers. Which is precisely



The world's most advanced personal computer chips ore monufactured in the world's most odvanced semiconductor factory.

where the G5 chip came from. Developed by IBM and Apple; the G5's DNA is from the core of IBM's highestperformance, 64-bit POWER4 processor. But just as

world's first 64-bit processor for personal computers.

impressive as the G5's pedigree is how it's manufactured. In IBM's (and the world's) most advanced semiconductor facility, the G5's 12-inch silicon wafers are untouched by human hands as robots guide them through 500

The 64-bit processor.

processing steps, creating S8 million transistors and connecting them with over 1000' of copper wire that's less than 1/800th the width of a human hair. The new PowerPC G5 has a 1-gigahertz frontside bus' that moves data

in and out of the processor almost twice as fast as the competition, removing a key bottleneck that limits performance. And it can support more than 200 in-flight instructions at a time –71% more than the 32-bit Pentium 4. Perhaps most importantly, the GS's 64-bit architecture can address dramatically more memory – over 4 billion times more than 32-bit chips



The world's first 64-bit desktop processor can only be found here: Inside the new Power Mac: G5, the world's most powerful personal computer

 so that systems built around the G5 can shatter the 4-gigabyte memory ceiling that limits every other PC on earth. The 64-bit PowerPC G5.
 It's not just a new chip. It's the next chapter in

personal computing.

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The AHD Opteron processor, superior 32-bit performance with expanded 64-bit capability, it's the only server processor designed to run your 32- and 64-bit applications simultaneously and without compromise. AHD Operon runs on AHDA1, a breakthrough architecture that enables 64-bit schoology on the x86 platform-creating a new class of composition.

The world's highest performing 2P and 4P industry standard servers are now powered by AMD Opteron processors. Get unparalleled 32-bit performance and the ability to transition seamlessly to 64-bit computing.



Leverage your existing investments while preparing for the future. It's one architecture across your enterprise that offers industry leading performance for your 32-bit applications, and doese's require a forklift upgrade as more 64-bit applications emerge. It's just another way AMD designs and builds processors with you in mind, for a closer look at the AMD Operon processor, visit www.amd.com/gozeron

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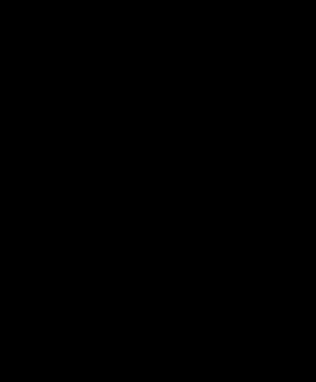
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Demanding a Better Desktop Alternative

IT managers are increasingly turning to thin clients, other options in push to cut PC costs

DOWN VEAR DOWN PARpallo, CIO at Textron Financial Corp., found himself having to replace a third of his L200 PCs. But he grow tired of the cost

of the annual ritual, and he began swapping out his desktops for thin clients. Forty percent of those PCs are now some. and many more will disappear

"I would consider it a failure if we don't eliminate completely the use of any desktops," said Raspallo, who has a

name for his project STIML or "Stop the Intel-Microsoft Insanity" And he isn't stopping at the deskton. He's giving road warriors handholds and tables PCs in lieu of Isotops. Total sayings will be around 25% annually for his Providence, R.L-

based company, most of it in reduced support costs. In the press for efficiency and cost reduction, data censervers consolidated. And now attention is increasingly

ters have been centralized and focusing on the PC. There's growing evidence of a determination among IT managers to sepressively out PC hardware and support costs by centralizing management and minimizing Microsoft Corp. licensing fees.

lack Klosterman, CIO at Volkswagen Credit. is so determined as sew of them Three weeks ago. the Libertyville, Ill.based financing arm

of Volkswagen AG began a pilot project using PC blades and thin-client appliances from Hewlest. Packard Co., with plans to roll out 200 PC blades next quarter. One way Klosterman expects to reduce Microsoft licensing costs

is by virtualizing the desktop. Employees access applications via a solid-state desktop appliance. They can log into a pr' blade from any appliance. so they're not tied to a specific desktop. With at least 10% of the employees out of the office at any given time VW Credit can reduce the number of CPUs and consequently its Microsoft licensing fees. "It

seems to have realistic potential for this," said Klosterman. The fact that the appliances can last twice as long as PCs while requiring less support also yields cost savings. Jesus Arriaga, CIO at Key Automotive Industries Inc., an auto parts distributor in Pomona, Calif., expects to cut Microsoft licensing costs by taking a server-based approach, Like Textron, Key Automotive is deploying thin clients from King of

Prussia Pa-hased Neoware Systems Inc., with application delivery software from Citrix Systems Inc. The licensing env. ings come from controlled access to an-

plications, Key Automotive has some 3,000 users, but only half of them have a regular need for Microsoft Office "When you deploy a PC, you have to provide Office know-

ing that they may be sporadically using it," Arriaga said. He will have 1,500 Office licenses on his servers and will manage user access from the data center. When his servers hit the Office license timit, he will need to buy more licenses, but until then he's paying only for what he uses. The project is 60% complete, and the enal is to move up to 95%

of Key Automotive's users to thin clients over the next year. Arriaga expects other CIOs to look at the thin-client alternative as well. "It's on the nath to being widely accepted," he

John Stings, chief technical officer at Russell Investment Group in Tacoma, Wash., is moving his 1,000 users to a Citrix environment to cut costs. He's using thin clients from HP's Evo line that run local versions of Windows XP along with a browser and multimedia players. Applications are delivered via a central server.

client move works only if the application environment is standardized In Russell Inunriment's case that has meant reducing its applica tions from 1 100 to 350 Stinel said he expects to save \$9 million over five years. "The pressure to get more for your dollar . . . is going to dictate that more folks take a look of this environment," he said.

The Linux Line Linux-based desktons that ac-

cess Web-enabled applications are setting the attention of many IT managers as well. But it may be unrealistic to predict that the Microsoftloaded PC is facing an imminear threat from either thin clients or Linux

"There is a lone history of people talking about the thin client taking over the world," said Bob O'Donnell, an analyst at Framingham Mass based IDC. O'Donnell said be inherited some "outrageous forecasts" from earlier analysts, who predicted huge advances

in thin-client adoption. In 1999, for instance, IDC forecast 9.5 million thin-client shipments in 2004, O'Donnell said. Today that estimate is 1.8

million, only about 1% of total



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IT managers say a thin-



PC shinments Still the thinclient growth rate is over 20% annually. "The challenge has been to raise the awareness level." O'Donnell said.

But Steven VanRoekel a director of platform strategy at Microsoft, countered that the Windows-based desktop remains a healthy, low-cost approach. He also cited failed thin-desktop movements of the past, "We've seen this trend, and the waves rise and

fall," he said. Microsoft does offer thinclicot options through Webbased applications and its Terminal Server, which is part of system. The company also partners with Citrix to belo companies deliver applications to remote users.

But VanRoekel said the company continues to believe that a "rich high-fidelity client" is the best course for most users. Microsoft is working to make the client deployment process easier with the release of its next Windows operating system, code-named Longhorn, which is expected in late 2005 or 2006. A new feature, called SuperFetch. will help applications launch

more quickly, and ClickOne installation will allow users to install an application by simply clicking an icon or link. That said, users are unques tionably beging thin clients Indeed, some vendors offering

deskton PC alternatives have tunities for Linux in call confored much better than other technoloery companies over the past couple of years.

Neoware, for instance, reported a 68% revenue gain for its fiscal year that ended June 30. And Fort Lauderdale, Fla.based Citrix reported the Windows server operating | a revenue jump of

20% year over year for the third quarter which ended Scot. 30. The vendors say a key driver of sales is security or well as regulatory require-

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ments such as Sarbanes-Oxley Many of the thin-client vendors, like ClearCube Inc., are privately held and doo't report their revenue But the Austinbased maker of of PC Nades claims that it has about 500 corporate customers.

And those HP PC blades that are being piloted by VW Credit will become generally available in March. HP claims that the blades have the capability to replace half of all desktops in medium-size and large companies [QuickLink 43336]. The Linux desktop is a different story. In the U.S. mar-

ket, vendors see more opporters, point-of-sale systems and technical workstations than for replacing so-called knowledge worker systems used

for office productivity and business functions. But that's not to say IT shops aren't examining Linux alternatives on the deskton.

The Skinny on Thin Clients

In particular many IT managers say they're keeping a close watch on Sun Microsystems Inc.'s StarOffice productivity suite. The Mayo Clinic. for instance, has 10 machines loaded with StarOffice and OpenOffice, a free open-

source office suite, as part of a study of Linux and thin clients, Ken Bobis, chief technical officer at the clinic's Scottsdale, Ariz. location, said he knows those office products work. "Clearly, we may have pockets where we want to deploy them," he said. The Mayo Clinic, which already uses Citrix for some of

its 4,200 desktoo clients, is investigating replacing more stand-alone desktops with thin clients as a way to cut licensing and support costs. It plans to continue using Office as well, but if the clinic de-

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Demanding a Better Desktop Alternative

IT managers are increasingly turning to thin clients, other options in push to cut PC costs

BY PATRICK THIBODEAU

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Early Adopter Stands Firm on Linux Desktop

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esktop is the lack of consistency in he user interfaces produced by the erious vendors and open-so arros. "It keeps it from catching

rry will always have some Woment to be kers as they get new PCs To me, if the company were to ly change over to Linux, I nk we would have an easier fire

the other hand, as an IT man hat's not a very big priority for me

PCs, Portals and PDAs



Terry Phicos, CIO at Treviso, Italy based cinther Recetton Smun Soft His company is two years into a fouryear project to modernize 4s IT systems. He recently discussed the vista Non-with reporter Patrick Thibodeau

Does your infrastructure upgrade extend to the desisten? What we are trend to do is no to an environment where we have much her on the deskips. We would like to hour a much lighter desktop environment, where we have a browser enterprise othermation portal any specific train that are required to do specialized

Continued from page 7 ploys Office only on desktops where it's really needed, it could reduce the number of Office licenses by a third, said

CIO John Cranmer. Although Sun says Star-Office is compatible with Microsoft file formats, some IT *People who have strucyled

through the maturing of the Microsoft products. I think are reluctant to go back to be-

We are also extremely interested in alternatives to Microsoft Office. Co. nonline that Mercent Office has become so incredibly blooded in livers of arrane leatures that for the our rare user if a malfy no longer so very easy to use 1 don't thois negotic are unter

terested in the jobs they have do to What do you think about thin clients? We're intreested in thin cleans that's for easy What interests me more than thin clients is a sort of hub strategy What the thin clean the relationship between a both de-

ing in the minority again," said Dennis Biederman, vice president of global IT services at APW Ltd., an electronics parts maker in Waukesha, Wis. And while there's plenty of interest in Office alternatives. it's not enceeh to promet a

one of user mobility and the network

I think cheap and powerful PCs or

switch for Cornell University's S.C. Johnson Graduate School of Management

"As a business school, we can't consider products that the companies who hire our Macentoches that are well intercented and well synchronized with national services and with mobile devices, like store powerful PDA telestrones, and work obsessment for the

Can a PDA/telephone provide functionality that's similar to that of a lastop? Things are clearly going in that direction. People don't like to esterial software i think receip on incarry around heavy theres.

> Microsoft Office has become so incredibly bloated . . . that for the average user. it's really no longer so very easy to use.

> students don't use," said Larry Fresinski the school's CIO We suspect that Office will be the mainstay for Fortune 500 companies for some time to come. However, if there's a shift, we would shift as well." Some IT managers clearly prefer to control costs through improved desktop manage-

ment rather than by moving to thin clients Brace Blitch, CIO at Tessenderlo. Reriev Inc. a Phoenix.

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One problem facine thinclient adoption is user resistance, leff Skeen, CIO at Gold's Church Va said III of the company's 37 corporate-owned locations now run thin clients. and the remaining seven will be converted in March He said ower 650 franchisens will be offered the system in its current format in July.]
"The big challenge we have

with the cornorate staff is that employees are used to having their own way with their systems," Skeen said, "What we've tried to do is keep a real close eye on the administrative staff and how they're using their PCs, so when we put the

thin client in, it's not a huge loss of freedom." O 43511

MORE ONLINE

Dr. Sin vis by concentration coversion of desistop rouges and strategies. QuickLink a3870

Overseas Users Pioneer Desktop Linux

Sun Microsystems Inc. today is expected to announce the sale of 10,000 seats of its StarOffice productivity suite to United India Insurance Co. in Chenna, It's Sun's largest StarOffice contract to date Sun sees its designo strategy

which includes its SunRay thin client, as a means to a very specific end: more server sales. But the company expects most of its initial desidos business to come from

TCost I sensitivity dictates that the majority of market opportuni ties will be in geographies outside of North America," said Jonathan Schwartz, executive vice president of polyware at Sun

Last month. Sun mached an acreement to sell up to 1 million seets of its Linux-based Java Desidoo System annually to the China Standard Softwere Co., a emment-backed consortum

(Queld ink 42944) And just best wark, the U.K. government signed a four-way agreement with Seas to explicate the cost and unablify of the Java Desktop System and Sun's Java Enterprise System (Quick), ink 43385). It is also testing op source softwere from IRM

Scott Handy, vice president in charge of designors at IRM said U.S. businesses interest in Linux desidons is limited. That's partly hecause software licensing fees reg-

resent only 20% of the total cost of ownership of desistops, he said. which IBM estimates to be between \$5,000 and \$7,000 per PC per year. But Handy predicted a gradual movement to Web-based applica-

tons deployed through portais. "We are multiple years into a decade long shift" to using Internet-based technology as a more cost-effective way to deploy an application, he said, adding that a shift to server-based delivery of applications can cut the cost of a desisteo in half.

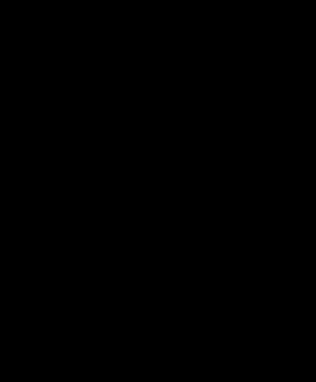
Sun expects the shift to be toward simplicity. Schwartz clied devices such as Java-enabled chones as an example and main trained that CIOs want the same kind of simplicity on their desktons. They want to make our penses, they want to manage it

centrally," he said. Sun has clearly emerged as a Linux desiston lender in a relatively short time. But next month Novel inc. is expected to finalize its purchase of Linux vendor SLISE Linux AG, a move that follows Novell's August accussion of Ximian Inc. which makes a Linux desistop environment [QuickLink 42689]

Charlie Ungashick, director of product management and market ing for Newell's Kirnian Services. croup, said the company will focus on technical workstation users and inventory and point-of-sale workers - not the general office worker

- Particle Debotion

E HOUSE CAN



PCs, Portals and PDAs



war project to modernize its [7 systerns. He recently discussed the mitathe with reporter Patrick Thibodean

Does your infrastructure opgrade extend to the desktop? What we are freno to do is on to an environment where we have much less on the desktop. We would like to have a much lighter desidon programment where we have a browner entermore information portal any specific trois that are secured to do specialized

could reduce the number of

Microsoft products, I think,

are rejuctant to go back to be-

We are also entremely int alternatives to Microsoft Office I'm positive that Microsoft Office has become so incredibly bloated in terms of arcane features that for the average utor. It's maily no longer so very easy to use. I don't think secole are ester ersted in software: I thenk coords are interested in the jobs they have do to.

What do you think about thin clients? We're interested in the clants that's for you What interests me more than thin clients is a sort of hub strategy. What the thin client doesn't necessarily suggest to me is the relationship between a high deoren of user mobility and the network.

ing in the minority seals," said Dennis Biederman, vice presi-

maker in Waukesha, Wis. And while there's plenty of interest in Office alternatives. it's not enough to prompt a switch for Cornell University's S.C. Johnson Graduate School

"As a business school, we can't consider products that Macanioshes that are well executed and well renchronized with network survices and with mobile devices, like more powerful PDM/telephones, are very interesting for us

Can a PDA/telephone pro functionality that's similar to that of a lapton? Things are clearly ocean in that direction Phonle don't like to carry around heavy things

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SOME HISERS SAY the best way to reduce costs may be to outsource their desktop suggest to near-shore or offshore providers. Last soring. Curtis. Helsel, vice president of data and technology management at the University of Colorado Foundation, was facing a 30% budget cutback for his Boulder-based

The foundation laid off 5.5 people including 12 help desk and network administrators in Helsel's IT department. It was part of a of the organization's [T

Beam Inc. CenterReam uses a near-shore facility in Saint John, Naw Brunswick, to manage and backups and to handle patch massay

ment Local Boulder contractors hired through CenterBeam hardwara problems. but for everything else users turn to the help desk for support Helical estimates sampas to the foundation of about 35% to

40%, most of it in salary posts Raturning to in house support "would

ba axtremely expensive for us," he said, "There is a real sense that we are locked into this for the long term. Patrick Thibodeso

ages pinting their companies' future desiden plans is Terry Phipps, CIO at Treviso, Italy based clother Benetton Group SoA. His company is two years into a five-

I think chose and powerful PCs or Continued from page 7 piors Office only on deskrons where it's really needed, it

Office licenses by a third, said CIO John Cranmer Although Sun says Star-Office is compatible with Microsoft file formats, some IT managers remain concerned. "People who have struggled of Management. through the maturing of the

the companies who hire our

dent of global IT services at APW Ltd., an electronics parts

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Simply collabo

an support multiple presenters and concurrent neetings with up to 2,500 participants per session

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AT DEADLINE

Board Raps CSC, IRS Over IT Delays

The U.S. Internal Revenue Service's oversight based said Computer Science Corp. should be replaced as lead contractor on a 3.135 billion if modernization project at the agency if delays and cost oversions aren't resolved soon. But the board also faulted the IRS for poor governance of the project. A spokesman for El Segundo, Call - head CSC said the vender team it leads it's make the considerable more seen.

Los Alamos Can't

The Los Alamos Retirenal Laboratory said if can't account for a high-quancity storage disk and since floppy disks following an inventory of classified materials that was done on Dec. 4. Officials at the New Hesizo-based List and the Very Alamos and the y were destroyed as part of its routine procedures. But the lab is retraining workers to enture that they document the destrutant they document the destru-

Peregrine Delays Its Financial Filings

Software vendor Peregrise Systems Inc., which energed from bankruptor protection in August, has delayed the scheduled filling of financial reports for its last fiscal year and the first half of its current one. The San Diego-based company said it's taking lenger than expected to account for restructuring moves made division fiscal 2013.

Short Takes

agency chose CAP GEMINI ERNST 5 YOUNG over incumbents Electronic Oata Systems Corp. and Acconture Ltd. for a 10-year outsourcing deal worth \$5.2 billion.

sourcing deal worth \$5.2 billion.JOHN SIDOMORE, former chairman and CEO of WorldCom Inc., died at the age of \$2. MARK HALL ON THE MARK

Major Rev Under Way For Open-Source ...

. Web site content management application, says the lead developer, David Wheeler, who also happens to be presiden of Kinethood eline, a San Francisco start-up. Bricolage, as the open-source app is called, "is soing through a major rewrite and being rearchitected," he says. The reason? Increased modularity and to give a joil to performance. There will also be improved integration with XMI. and a centralized database.

also be improved integration with N which is now the open-source Postgres. But support will be added for MySQL, which is also open-source. You might think only small-time users bother with Pictolage, expectify since Wheeler's customers routinely safe for and then fault the development and changes that everyone clies then beeefits from Wheeler the complete advantage of Well. he claims: effective management of Well for claims:

care. The most important competitive advantage, Wheeler says, "is not paying sia-figure lecensing foes to Wignetia." That notion has appealed to RAND Corp., Entertainment Tonight and Portugal Telecom SGPS SA. Even the Dean for America presidential campaign voted for Bricolage, But Wheeler

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presidential campaign voted for Bricolage. But Wheeler is unsure exactly when Version 2.0 will finally hit the streets. That's probably because he's patting the fintabling touches on the 1.8 upgrade to be refeased by the end of this month. It will include the ability to centrally manage multiple sites while maintaining individual workflows and document types for each site. And you thought you were busy. If you've been paying attention to brends in antigom, antiwas and content-filtering rechnologies, you've probably noticed that discrete

you've probably noticed that discrete products are increasingly being delivered as puckages that allow corporate policies to be applied from a single

naturagement comode. Matt Dirks, NetUQ Corp's vice prevident for management security products, notes that point products for secure messaging are becoming less interesting to IT managers. In the coming year, you can expect to see some changes in that regard for the San Jose-based company's Vigilent, Mail-Marshall and other products. Although Dirks declined to say when or how the changes will occur, he

did say a rebranding effort

will commence in 2004. Expect to see MaiMarshall and others to be thrown in the slammer and replaced by the more vanilla "NetfO antisnom" and the like # Frie Hahn, chairman of Proofpoint Inc. in Cupertino, Calif., believes, NetIO has some catching up to do, since his company's Proofpoint Protection Server already is a uniformly named antisnam antivirus and content filtering rolled into a single policy-based application. But Hahn is less interested in bashing the competition than in knocking recent antispam afforts by politicis and Microsoft. He labels new foderal antispam legislation "a recipe for disaster" because it encourages the spammee to ask the spummer to remove him from a list. (Yeah, right.) And he's suspicious of Microsoft's recent announcements about adding what he calls "very good" antisnam features to Outlook and Exchange

They're using an antispam message just to sell more software," he concludes. Tom Detmer, CEO of CenterStone Technologies Inc. in Denver, says his company is getting a lovely holiday gift from venture capitalists that will approach \$3 million. And what will the retail supply chain application service provider do with the dough? One key development will be integration of its Buyer's Page online application with leading point-of-sale (POS) programs, starting in February with Retail Pro POS from Retail Technologies International Inc. in Folsom, Calif. Detmer claims Retail Pro has 30% of the POS market share in the 10,000 or more sporting-goods stores in the U.S. Users of Fountain Valley, Calif.-based Cam Commerce Solutions Inc.'s POS tools will be next in line. And later in 2004. Detroes says, a few of the VCs' bucks will be exchanged for sures when CenterStone localizes its software for the booming Euro pean market, Q43492

Government Gets Low Cybersecurity Grades

BY DAN VERTON WASHINGTON

Congress last week slapped federal agencies with an overall dismally low grade in cybersecurity. But some government and industry executives are calling this year's report card a success and a potential turning point in security preparedness. Despite the government's overall grade of D*— and the Figiven to the Department of

Despite the government's overall grade of D — and the F given to the Department of Homeland Security — by the House Government Affairs subcommittee on technology policy [QuickLink 43439], gov-

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proved its oumeric score and its overall letter grade drassatically — from 28 to 69 and from an F to a D: — because it developed a method for conducting systems certification and accreditation (C&A) in a costeffective and efficient manner. The DOT got the idea from the U.S. Nuclear Regulatory Commission, which earned a grade

of A this year.

"While other agencies spend
\$25,000 to \$100,000 per system
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Another major development likely to be reflected in next year's report card arises from regulatory changes introduced

last December by the Federal Information Security Management Act. The key change was a requirement that each government agency develop its own systems configuration guidelines with specific security settings and patch man-

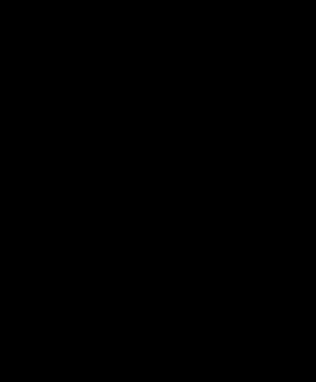
Paller said the FISMA requirement will likely push more agencies to demand more secure software from the vendor community.

43526

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AT DEADLINE Board Raps CSC, IRS Over IT Delays

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NFWS

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which is now the open-source Postures. But support will be added for MySOI which is also open-source. You might think only small-time users bother with Bricolage, especially since Wheeler's customers mutinely ask for and then fund the development and changes that everyone else then benefits from Where's the competitive advantage

Well, he claims, effective management of Web site content shouldn't be considered | as packages that allow corporate policies a core competency for IT pros, so they shouldn't care. The most important

competitive advantage. Wheeler says, "is not paying six-figure licensing fees to Vignette." That notion has appealed to RAND Corp. Entertainment Tonight and Portugal Telecom SGPS SA Even the Dean for America presidential campaign voted for Bricolage. But Wheeler is unsure exactly when Version 2.0 will finally hit the streets. That's probably because be's putting the fin-

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IBM, Rational Reach Common Ground at the One-Year Mark

Integration efforts move forward as company builds on Eclipse framework

Trisciacijon efforts remained a work in progreus ar IRM marked the original progress ar IRM progress of the original progress progress of the Software Corp, here last week. But the company showed signs that it's making headway. Its newly consolidated developer Works Web site, launched last week, will give the Rational pages the same look and feel as those displaying contents for IRM's other

software product lines.

1BM also plans to expand its
developer outreach programs
next year by increasing the
number of technical events it
stages from 120 last year to
400 next year, said Buell Duncan, general manager of develoner relations at IBM.

Duncan also said Rational's user conference will be folded into IBM's developer Works Live conference next year "because Rational is the lead inside of IBM for the efforts as we drive this IBM software devalopment platform"

development platform.

Executives outlined how the company will continue its long-term effort to move to a common architecture across all of IBM's software products, including the Rational development tools. To that end, IBM is using its Ecilpse open-source development frame-

work to give developers a common interface for its tools. "We were a business partner with IBM for many years before joining IBM, so we had already made considerable progress integrating our products," said Mike Devlin, the former CEO of Rational and now general manager of IBM's Ra-

tional software business unit.
"But now we're really accelerating that."

The mercer is working out

IBM's Rational Division: YEAR 1

Here are some of the highlights of Rational's first year in the

MOTE Professor two rear products — MM Restaural Playabli Beauthquer hand or MRA TASE Teature; specials Call Partierus Salas, TASE Developer Place pation controrisation and configuration hashes to CBM Patiental Life (in Process.)

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DECEMBER Embeddet With Restored Robert tols FM Rest recolories

well for customers such as John Pritchard, a software architect at Lockheed Martin Corp.'s Integrated Systems and Solutions unit in Colorado Springs. Lockheed is an IBM hardware customer, and Pritchard's group uses IBM's WebSphere application

server and integrated development environment, as well as Rational modeling and testing tools.

Pritchard said that in the past, the group had to go through the integration process to get the code generated by Rational's Rose modeling tool imported into the Web-Sphere Studio Application Developer.

"Now they're doing that, and it allows us to focus on developing a system, he said, adding that the next step will to move to the newer Rational XDE modeling tool, which is more tightly integrated with WebSobere Studio.

no Window

Now that Rational's Purify testing tools are integrated into WebSphere Studio, developers no longer have to export files from Studio to Purify and close down one tool to work in the other, Pritchard added. Instead, they can work with a

single window open.
"I think these are things
we would probably have seen
anyway, but they just come out
faster now," he said. "You'll see
an IBM update of a product,
and they've not a bunch of Ra-

and they we gut a outen to teational integrations with that." Pritchard said he also would like developers, testers and product managers who use different IBM and Rational tools to be able to look at a common interface when they work. He said that Eclipse is neared toward developers and of marketing in the Rational division, said the company not only will continue to work on integrating products that currently can't share a common user interface, but it will also tighten integration among products thet have already beco integrated through the Eclipse framework. Schurr said wh850herrs Stu-

dio Applicatico Developer features a Unified Modeling Language visualizer that was jointly built by the WebSphere and Rational teams. But he said Rational's XDE modeling tool will be more tightly integrated in the future. The same is true of IBM's Tivoil performance monitor-

Two is performance monitoring tool, Schurr added. So far, the Rational Robot automated testing playback techcology has been integrated, he noted.

he noted.

The Rational Unified Process (RUP), a set of best practices for developing software,
was updated to be more componentized and customizable.
Schurr said that in the future,
RUP will add content from
the Summit methodology that
was obtained through IBM's
accusition of Parc Consults.

last year.

But Mark Driver, a Gartner
Inc. analyst, said that although
some of his clients are seeing,
value from the broader range
of developer products that
IBM now offers thanks to the
Rational acquisition, other
users are concerned about
the Rational division's suppoort for non-IBM products

like Microsoft Corp.'s . Net technologies. Driver said be thinks some users may stop using Rational tools as Microsoft starts to offer tools that are more competitive with Rational's development life-cycle products. Rational encutives insisted

that they will continue to support the Net development environment. And Devitin said be anticipates that Rational tools eventually will let developers build service-oriented architectures with a common set of modeling and testing tools, even if some services are. Netbased and others are ZEEbased and others are ZEE-

All to Release WebSirbers Undete

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inter of Widdlestein, Hy and EM opens to der debretty therein 6.0 in the econot had of the quest The information of the two expects for SEC LA and participates and multiply toprovenersis, Suiter said. — Carrol Shine

has added modeling. Eric Schurr, vice president



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HPS II survice management solutions let you see how each event affects your services so you can apply your resources more intelligently. You's spending up to 80% dyor budget entirelising your cernier (spending, and deliyer demodelige lay you creat? this sounds like in job 61° COV Cyamifree management solving layers you have you see you entire inflamination or all possible on a services lend. The made not wait upon in on DC adult, enterprise conteners who used Openifree software out encogement line in half while increasing server ordisability 79% Would have been been described by your being half or conditionally 79% Would have layer layers and compatible in your fails plan?

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IBM Wins Two Big IT Deals in Furnne

ISM annument automorphic con in Europe. It will manage the IT infrastructure of tire maker Michelin in Europe and Morth America under en eight-year deal worth \$1.2 billion. About 600 Michelin workors are due to transfer to IRM The other deal calls for IBM to manage shout 65,000 desktop and laptop PCs for insurer Zurich Financial Services, Zurich will transfer 470 pyres to IBM and pay a usage-based monthly fee.

Microsoft Belatedly Delivers Patch . . .

A clitch in Microsoft Corp.'s Wisdows Update service caused a se-curity fix that was supposed to have been sent to users last month to be delivered on Dec. 9 the same day Microsoft said it wouldn't release a monthly set of patches during December. The ich is for FrontPage Server Exons, a group of Web site management tools. (Se online for more details: Quinkl ink 43475)

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Drop Some Products In other news, Microsoft said it will stop selling Office 2000, SQL Server 7, most versions of Windows 90 and various other prod uch on Dec. 23. The sales cated is part of the deal that the compa my pigned with Sun Microne Inc. in 2001 to settle a logal dispute over Java, Microsoft had said it would retire the products today but extended the deadline to allow more time for final downloads.

Short Takes

THE SED GROUP INC said its Web site as well as its e-mail and cuser support systems were disrupted by a denial-of-service attack that began last Wedn

ATAT CORP said it will begin offering a full set of voice over-IF services to corporate users next

BRIEFS Some IT Execs Are Excluded From Sarbanes-Oxley Planning

Survey finds some firms aren't putting tech managers on steering committees

XICUTIVES AT SOME companies that are addressing the red anirements of the Sarhanes-Oxley Act say they were quick to involve IT manavers in their compliance efforts. But that's not happening universally according to a re-

port being released tomorrow Many companies are leaving IT executives off of their Sarbanes-Oxley compliance steerone committees. The Markett Group found For example six of 16 businesses that have not up such committees said in an October survey conducted by the Arlanta-based consulting Orm that there are no IT renresentatives on their panels.

Hackett surveyed 22 compa nies, four of which said they had yet to form compliance committees to oversee proje ects related to Section 404 of Sarbanes-Oxley. That section requires publicly held companies to conduct annual evaluations of their financial reporting controls and procedures Allan Frank, president of

Answorthink Inc., Hackett's parent company acknowledged that the survey's sample rite was small But he said the results map with anecdotal evidence that the firm is seeing amone its elicots.

Some companies "perceive [Sarbanes-Oxley] as a finance issue, or they might not be far enough along for the light bulb to so off." Frank said, referring to the recognition that it's vital to include IT managers in the planning stages of projects.

Inclusive Policies

The E.W. Scripps Co. came to that conclusion quickly, said Oscar de Jongh, managing director of the project management office at the Cincinnatibased media conglomerate.

Scrippe recently himsel a new chief financial officer and promoted the controller of its IT department to corporate controller. Those two executives have brought in a lot of participation from the IT group on the company's Sarbanes-Oxley project, de longh said. He added that Scripps' compliance steering committee includes the company's chief

technology officer in addition to the CFO, chief operating of ficer and business unit leaders. Mark Nagelyoort, vice presidept and internal control man aper at Hindson United Bank

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Compliance **Projects**

represented on your Section



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HP Reorg Unites Products, Services

realign sales efforts

BY STACY COWLEY AND PATRICK THIBOODAU Hewlett-Packard Co. last week

announced a corporate restructuring, merging its enterprise hardware and software unit with its services group to form one division called the Technology Solutions Group

The move is intended to unify HP's sales teams in their approach to large corporate accounts, CEO Carly Fiorina said during an HP meeting

with financial analysts in New York. The changes began in lune and will be finalized in mid-2004 she said. HP plans to continue breaking hardware, software

and services revenue out separately in its financial reports. "We don't expect undue disruption.

This has been part of the noth we've been on for some time."

CFO says goal is to Ronald Evans head of the 94,000-member Interex HP

user group to Suppoyale, Calif. said combining the services and product groups should improve customer support. "It can't but belo in providing better communications with the customers," Evans said. "You are putting all the systems, software and services

at their disposal through one operation. In a memo to HP employees last week. Fiorina detailed the management changes which include putting Ann Livermore, who heads the services

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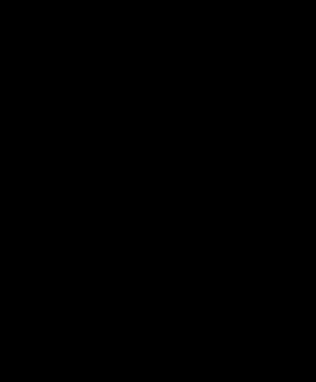
analyst at Illuminata Ioc. HP made the announcement a day after saying it would merge its global operations and IT divisions Longtime HP employee Gilles Bouchard will run that group and assume the title of CIO (Quick) ink 433971 Fiorina cast that IT consolidation as a sign of the company practicing what it preaches.

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Cowley writes for the IDG News Service.



BRIEFS

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Offshore

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Lundberg and representatives of other trade groups arsue the U.S. job protectionism prevents companies from investine in new areas and ultimately hurts innovation and iob growth.

New Activists.

But those arguments won't stop the efforts of workers who have lost their jobs. IT ac tivists such as lames Pace, leuislative director for the Rescue American lobs Foundation in Mesa, Ariz., said IT professionals are beginning to get involved with groups representing blue-collar workers. "We are trying to make this as big an issue as we can," he said. In addition to settine restrictions on call centers

some bills seek to make it contracts to be awarded only to U.S. citizens, and others aim to set limits on the use of visas such as the L-L which is used by companies to transfer emplayant from other countries

Among the numerous of those efforts is Bob Bauch, executive director of the AFL CIO Industrial Union Council Anything in the digital age that can be moved ... will be

moved," he said Frica Groshen, an assistant vice president at the Federal Reserve Bank of New York. said the U.S. is in a recovery with respect to output, "but

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Malicious backers are getting much better and faster at exploiting software flaws. Davidson said during a namel

New Protectionism?

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 A bill sponsored by Sens. Craig Thomas (R-Wyo.) and George
Weavenigh (R-Objo) was at prohibit protectors from performing work outprin the U.S. Sen. Christopher Bodd (D-Conn.) and Rep. Nancy Johnson

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the country's competitive ad-Policy Institute in Washing vantage is its ability to innovate. "Constantly shipping iobs abroad signals our success as innovators," she said president of the Progressive

ton, said there are policy changes the government can make to help the IT industry. He cited examples such as investing in IT projects, boostine training and giving affected workers the tools they need to adjust to the new environment, including assistance with medical coverage and expanded unemployment insurance

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The relatively glacial pace at which some companies notch their systems against security holes makes them attractive targets for zero-day attacks as well as conventional ones, said Gerhard Eschelbeck chief technology officer at Qualys Inc., a Redwood

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day attacks are "potentially devastating" for companies Shores, Calif.-based company for rapidly responding to that provides vulnerability asthem said Dennis Broower a senior vice president at Dublin. Ohio-based SmartPipes Inc. a provider of managed network services

The only option that IT managers may have if they are caught unprepared by an attack is to shut down their systems and restart, Brouwer said. "It's almost like the response after 9/11." he noted. "The first thing you do is to

get all your airplanes on the ground." © 43525 OTHER CONCERNS any details even't the only there to

Zero-Day

tacks could wreak "I'm very concerned about

it.* said loseph Inhoff, LAN administrator at Lutron Electronics Co., a maker of lighting equipment in Coopersburg, Pa. Because zero-day attacks seek to exploit security holes in software products before vendors can plue them, the potential for damage is something that Latron's management is especially worried about Inhoff raid

Inhoff attended the InfoSec show to see how automated natching software could belo his company respond to zeroday attacks once notches are released by wendors "Em tryine to figure out what I can do

about it," he said. No major zero-day attacks have been launched so far. But IT managers probably won't have the luxury of being able tn put off needed security improvements for long, warned Mary Ann Davidson, chief security officer at Oracle Corp.

discussion I set summer's Blaster worm, which was one of the most virulent and wideseread ever, bit the Internet barely one month after Microsoft Corp. issued a patch for the Windows flaw that the atrack exploited A variant of Blaster called Nachi struck less than a week later. By com-

parison, last lanuary's SOL Slammer worm didn't appear until eight months after the discovery of the SQL Server database vulnerability it took advantage of "You can see that the time

lines are collapsing," Davidson said. The trend suggests that it's only a matter of time before users start seeine attacks. servings flows that haven't wet been disclosed, or ones for which natches haven't yet been released, she added.

The number of new vulner abilities and exploits surfacing on IT security discussion forums and mailing lists are another indication that such attacks aren't far off, said Todd Kunkel, network system security administrator at Adelphi University in Garden City, N.Y.

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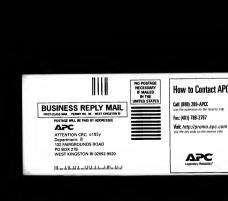






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C&W Users Relieved by Deal to Sell U.S. Unit

Turnamund firm agrees to buy Web hosting operations

Cable & Wireless PLC last week said it has found a hover for its U.S. Web hosting operations, giving a sense of relief to some corporate users who have stuck with C&W America since the unit was put up

for cale in lune The agreement to sell C&W America to turnaround investment firm Gores Technology Group LLC "seems to bring some uncertainty to an end." said Ron Pellowe, director of

systems and networks at EquipNet Direct Inc. in Braintree Mass "It note a much stronger financial backer behind them "

Pellowe said EquipNet. which runs an online marketplace for surplus industrial equipment, considered switching to a new hosting provider when I andon based C&W made big cuthacks in the U.S. late last year and announced its pullout plans [OuickLink 38994]. But Equip-Net decided to stay the course

with C&W America "We felt the data centers were fairly stable, even though

the company was having

changes " Pellowe exid. He added, though, that he needs to bear promises from Gores officials that they won't close any more of CAW America's hostine facilities

The Reston, Va.-based U.S. unit has shot down eight data centers this year, leaving 15 still operating. A C&W America spokesman said no additional closines are planned but added that nothing will be

ruled out once Gores becomes the owner. In the meantime C&W America will take other cost-cutting actions, including a network consolidation and representations of contracts.

The sale to Los Angelesbased Gores is expected to be completed by February Gores will pay up to \$125 million for C&W America, depending on future business performance. By comparison, C&W paid

BUYOUT DETAILS

\$575 million and assumed \$180 million worth of liabilities when it bought the U.S. data centers and some overseas facilities from Exodus Communications Inc. in early 2002. Steve Wigginton, vice presi-

dent of marketing, operations and development at Neoforms Inc. in San lose, said he hasn't had any problems with CAW

America's hosting services "We're certainly bappy to see what looks like a favorable resolution " said Wissinson whose company develops supnly chain systems and online marketolaces for bospitals and suppliers of medical products. Rick Thimble, IT manager

for the U.S. and Europe at plastic parts maker Moldflow Corp. in Wayland, Mass., said he also is happy with C&W America's performance and bones to maintain his relationship with the hosting provider. But Sean Armstrong, senior Internet manager at Network

Intelligence Corp. in Walpole. Mass., said his company began shooning for a new hosting vendor late last year and recently signed a contract with AT&T Corp. "We were sick of the uncertainty," he said. O 43474



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MARYFRAN IOHNSON

Colliding With Customers

HEN DELL YANKED its corporate PC tech support out of India and brought it back to U.S. soil recently. the move snapped a lot of people to attention. And no wonder. Here's one of the indus-

try's most byperefficient cost-conscious vendors abandoning - at least for oow - a cheaper offshore dternative because of customer complaints about poor service.

In our front-page story last week [*Offshore Support Ourstioned " Ouick-Link 433401, other heavyweights such as IBM. Oracle, Hewlett-Packard. Microsoft and Computer Associates hastened to ear that they're not planning any Deli-style retreats from offshore tech support centers. But if the customer pain meter keeps moving in the wrong direction - and users start walking away

over service issues - those offshore savings could look a lot less compelling in the long run. So far, of course, the vendors know better than to redirect their high-end customers overseas for support. A Microsoft VP made the point in our story that no "premier support" contracts will be serviced out of the

company's new shop in Bangalore. In theory, the location of technical support people shouldn't matter as long as the service quality is kept high and language barriers are kept low. In reality, the user experience isn't so idyllic. The rapid growth of India's multibillion-dollar outsource ing industry has made skilled IT workers harder to find and keep, especially in the call centers, where at-

trition rates can reach 35% a year. We heard from many readers last week with stories to tell about frustrating offshore support encounters. They complained about rigid, "by the book" technicians who wasted their time wading through fixes already tried. They ran into problems with

bad phone connections. strongly accented English that was hard to understand, and just plain in-

competence. "The folks answering the support call do not know the product they are supporting nor do they know the tools for reporting problems." said one reader, "If Dell. Microsoft, HP, etc. contime to move support

jobs to India, they won't have to worry about customers, because there won't be am A New York-based chief technology officer, who'd had no complaints

about previous Microsoft support saw service quality change just recently when he called about an Exchange problem. "The call got routed to a support

center in India, and the technician in this case was obviously unqualified." the CTO said. "He made little attempt to understand our problem ... and

within five minutes suggested we rebuild the whole machine and reinstall Exchange* - advice wisely ispored. Ultimately an experienced technician

in Dallas solved the problem. Another IT manager contended that the total cost of software ownership is spiraling in the wrong direction. "Now companies are sending their support overseas, costing customers more in time to resolve the problems," he noted, "All they really did is shift the expense over to their

Despite the backlash, there are few signs that offshore outsourcine's growth is slowing. Irate customers are certainly going to attract more attention to the dark side of offshoring than displaced software technicians will, but we're still long on anecdotes and short on statistics about the long-term impact

In the meantime, emerging best practices suppost that you need to ask for performance metrics about problem resolution, as well as independent surveys on customer satisfaction. Make sure your vendor's training programs are hammering on language skills as much as on technical ones

If Dell's action is an early warning. other vendors may also end up changing course to avoid a customer collision. O 43485

Get Me

Supply

OMBINING the words middleman and health care in one sentence is a sure way to produce grimaces among the most kind and opti-

If you think I've been sitting too based Neoforma Inc., Premier is connected via the Web to a hosted market-

place to order and track purchases Back-order notification which used to take % hours, is now nexcessed in a more

two hours. The replenishment supply tomated, with fill rates now managed through a link to Premier's purchasing system, which in

turn does a hand shake with Marketplace@Novation - Neoforma's supplier, distributor and manufacturer network. And there's even a wireless connection for those actually walking around providing care and dispensing

products Solarek said Premier has saved \$1.3 million over the past two years by cutting transaction fees, streamlining purchasing procedures and negotiating better prices. Through the bosted application, Premier accesses 330 health care supply vendors. Impressive sure but the real innovation is the last mile into Premier's legacy purchasing mod-

ule and ERP systems Corporate IT lets third-party IT operations make dedicated connections to internal applications. The benefit is that the hosted operators map to myriad electronic data interchange systems while IT maintains a single Web connection from the data



PIMM FOX

Chain, Stat!

mistic people. But here over With the right kind of middleman, even manseed bealth care can be improved. close to the other, then consider the results for leff Solarek director of material management at Dayton, Ohio-based Premier Health Partners Inc. Solarek oversees all the purchasing, distribution, receiving and warehousing for seven large Dayton-area bealth care facilities. By booking up with San Jose-

center to the service provider. As a result, you can keep your mainframe. Plus, you get savings by tracking what you buy, measuring what comes in and knowing how much you spend. Having up-to-date information gives you contract power, whether for syringes or bed linens. And you don't have to be a 1,000-bed facility to qualify. Neoforms has teamed up with Vista, Calif-based di Orthonodice Inc. to take the hosted setup to smaller sites such

as doctors' offices, pain management clinics and surgery centers. "Nobody tracked what was coine on [before]," said Michael McBrayer, senior vice president at di Orthopedics. Now administrators are runni things more as a business. And they've not to know what's comine in, what's oine out." They can track everything om the Ace bandages that your doctor hands out to X-rays and office supplies. (Say, does that mean no more

free samples?) Sure, it's depressing to think of the practice of medicine in terms of ROI but like the common cold such thinking is here to stay. At least hosted solutions for supply management are a tan-eible nalliative O 43330

ment. PCs and software there's growing evidence that most of this excess capacity has been consumed and that pent-up demand is building. Keen in mind that the last major slowdown in IT spending lasted roughly

five years, from 1986 to 1991 Economic cycles, Since IT now comprises nearly half of all U.S. capital investment spending for it can't grow without the support of a sol id economy. Fortunately, the

U.S. economic recovery of the Bush tax cuts, the bove federal deficits and the rapidly falling dollar. these policies have provided a powerful short-term stimulus that has led to

dence. On the other hand, any major new terrorist attacks in the U.S. or any worsening of the situation in Iraq could easily put an end to this momentum. mer confidence in IT. Forecasters are trained to rely on empirical data

seems to be well under way. Whatever you think about the long-term wisdom renewed business and consumer confi-

but the single most impor-

tant factor has always been psychological. That is how strongly do customers helieve in the potential of IT? During downturns, everyone likes to talk about sbort-term payback and ROI. but for most major IT

projects, such measurements con't be made with accuracy. Consequently, customer confidence and perseverance is often required As I wrote lace month, Accenture's new ad

campaign featuring Tiggr Woods may signal a turning point in our industry's self-confidence and leadership (Onick-

Significant innovation. Historically, mafor supply-side innovations have helped drive the IT industry forward. Think PCs. LANs, the Interpet and much more. But don't expect the com ing recovery to be led by grid computing, blade servers or any other vendor technology, Instead, the most important innevations will be those comine

from IT customers. Reasons for optimism include a revitalized online advertising business, the growing interest in RFID, the success of Rosetta Net and the strong initial growth of Apole Computer's (Tunes, On the other hand many forms of potentially important demand-side innovation continue to lag, especially in health care bill pre-

sentation and e-government

The customer-driven innovations listed above suggest an important distinction, Many new sources of IT spending growth won't occessarily be part of the traditional IT budget. This is why many of the leading "IT spending surveys" could easily underestimate the strength of the coming recovery and why mainstream IT hudgets may not feel any real sense of relief Looking ahead, the prospects for overall IT spending and the IT departs ment's budget will increasingly di-

verse. © 43327 WANT OUR OPDION?

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DAVID MOSCHELLA

An Optimist's **Analysis**

ORE THAN three years after the Internet bubble burst, IT forecasters are still being asked. "Will robust growth in information technology spending ever return and, if so, when?

Count me among the optimists There have always been four main drivers of IT industry growth: inventory levels, the overall economic environ ment, customer confidence and major IT innovation. Although the current situation in each of these areas is by no means ideal, all four factors are now decidedly positive. This hades well for a pretty good 2004 and a potentially strong 2005-06. Consider the following evidence:

inventory levels. During the dot-com bubble, many companies overinvested in FT. It's hardly surprising that it has taken a few years to burn through the resulting excess. However, in areas such as mass storage, telecom equip-

DHS. Heal Thyself

THE PAGE ONE STORY Teds (QuickLink 43338) was a very interesting article, However, the Department of Horneland Security should probably remove the stone from its own over before kenning for Jack Vinson the motes in the eyes of the IT industry, The Oom Relay Database locium clearly shows that the DMS's

primery inbound mail server is an open relay - it will accept connections from amenhors and income! mail arrivings - making it a rige for get for sending spam or other forms of abuse, such as mail floods. Since the DHS's own server is what Torn Ridge might coll "an attractive two

get for terrorests," perhaps more time should be spent helpterion the department's security. old Remeratoin Springfield, Va.

A Taxing Matter WEN FORFERD that we

ble by having all merchants act taxes ["Don't Shoot the internet "QuickLink 428931. Yes, the current system with 7,500 tax junsdictions is complicated but haven? nationwide brick-and-morter vendors been dealing with this for unant? If notine marrisants can? compete on a fairer playing field maybe they haven't maly incounted arrything beyond a way to draw peggie with artificantly low onces.

Knowledge management advocate, Evanston, Ill.

Novell's Future

Para fors opinos or Novel/SUSE would be understandable if this was a normal growth type acquisition but Nov of s vieblity is at stake ["Novel! -SUSE . Problems, * Quickl, mk 43073]. Here's how I see it Novell will abandon the Nef Ware kernel within a lew wors (through it may continue to support the installed bone) as it remaios itself as a Limin software company. The SUSE emees can continue to work on SLISE as a senarate product and

just as a base for Novel's Linux de-

velocrated efforts. The Novel em-

on porting and developing Novel

products for Linux and Windows.

And there is still plenty of work to be

players in Utah will continue to work

Workforce du Jour S EGARDING THE ARTES F To-Real Hits Back on Outcourcing Job Fears* [QuickLink 43204] companies went to meaning their crofits. When India's economy inevitably begins to swell and indice workers rightfully ask for higher

done to enable Linux to take over

the traditional roles performed by

Microsoft and NetWare server oper

be working to integrate Linux desk-

nologies and to evolve the Linux

work being done to greate Java

client norts of certain Windows

software to enable if to work consu

piatines cross-piatines technolo-

whole new world of proportionities

for Novell 1 do some with Fox that

Novell needs to be smarter than d

product marketing. The company's

handles the new opportunities that

has been in its accusations and

very survival depends on how e

Longs affords

Sm Anderson

Nyack NY

gies may be Novell's other strength

I think this quechase powers up a

desidos. I can foreses development

ileries to adjust for a higher cost of twing, Ching (or prother player) will be all too happy to provide a cheapating systems. The Ximian group will er worldome. Then it will be the Chinese making bold statements tons with Microsoft and Novell trickabout being better, smarter and

more motunied As a side note Recorders of where companies go for cheep labor, they need busins, noty? So what bappens to their class- or consumer-based markets when the median curchasan, are all out of

work or progressively more undercold. In the end, aren't flyese comnames author their own futures? Willem Harlow Software marketing manager,

Los Angeles

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TECHNOLOGY

SECURITY MANABER'S JOURNAL
GOOD Firewalls Make Good Neighbors
Placing firewalls between corporate divisions
can help prevent the spread of malicious
code, but Vince Tuesday finds that getting
the rules right isn't reav Page 34

QUICKSTUDY Windows Installer

This Windows service allows applications to be installed cleanly and consistently and tracks the use of system resources to minimize conflicts. Page 32



Web Services Put GIS on the Map Geographic information system vendors

are moving to support Web services. This should enable IT to embed powerful analysis and mapping services in familiar end-user applications. Page 30

CRMToGo

Hosted CRM services offer easier and faster setup and more customization options. But integration, data control, training and even privacy issues could shift the decision toward an in-house implementation. By Mark Hall ECISIONONE had just scrapped its IT outsourcing deal with Electronic Data Systems Corp., but not every one of its applications was destined to be run inside its own data center. Its CRM effort would either continue as a mishmash of Excel spreadsbeets or move to a hosted service.

The reason. "We wanted to get our CRM software up and running in 46 days," receils Frank Tait, vice president of marketing at the Frazer, Pa-based IT support services firm. "We were also constrained about bow much we could do because we were bringing all of IT back in-house."

Decision/In opped to go the bornet route and selected a service of ferred by Salestoniccom Inc., which not that 6-day healing for providing a CRM system to the company? Ho alset and marketing user. That success underscores one of the key benefits of subcreption-based CRMswift deployment. But there are technical challenges beyond the need for limitally implementation that companies must consider when deciding whether to subscribe to a CRM software service, or license and run CRM software themselves. IT managers must evaluate potential problems.



which run the sumut from customization and resining to data integration and security.

For some companies, customizane CRM to reflect the needs of a given sales organization is critical. When subscription-based CRM first appeared, that wasn't possible. Customization flew in the face of the application service provider (ASP) business model

of manuring a single code base for many customers But as CRM subscribers become more sophisticated, rigid restrictions on modifying the underlying code limited their capabilities. Some companies looked elsewhere, "Every CRM implementation be comes almost a proprietary product," says David Leibowitz, managing director of solutions architecture at Lexington, Mass, based Excelency Corp., which supports utility and telecommunications operations That's why Excelency shifted from Salesforce.com's bosted service to an in-house implementation of Mi-

crosoft Corn's CRM software Faced with demands for customization. HOSTED CRIM ROL San Francisco-based Salesforce com the Return on investment car current leader in the CRM subscription vary when measuring long market, shifted its stratery earlier this vs. short-tern prout year with the introduction of Sforce, now O QuickLink 43110 in its 2.0 release. According to company Chief Technology Officer Cary Fulbright, users "can create their own custom data entities." He

adds, "We control all the code, but they can change data types." Yamil Hernandez, director of FF at Siemo-Tau Pharmaceuticals Inc. in Gaithersburg, Md., has done just that, changing a standard Salesforce.com field to match those preded for his 35-member sales ream's

custom work with dialysis centers. Application integration has been another stumbling block for ASPs. Salesforce.com has struck deals with third-party suppliers, such as Tiboo Software Inc. in Palo Alto, Calif., to provide standard connectors between its software and other enterprise applications.

But even with those changes, the subscription model for CRM doesn't interest Michael Fields. director of business sales operations at Cincular Wireless in Atlanta That's because the most critical aspect of CRM, he argues, "is solving business process problems." That means much more than making application changes at the field level. True business process integration, he says, requires deep links into in-house and customized proprietary applications as well as off-the-shelf software.

Economies of Scale

A longtime user of CRM software from Siebel Systems Inc. in San Mateo. Calif. Eiglds save that a large company like his, with L800 CRM users, has to be able to manage an application more ricorously. The fact that ASPs regularly update their code bases

makes him extremely nervous because of the possibility that an interested business process could be broken by a change that he doesn't control. But Fields isn't onposed to subscription services on principle. In fact, he says a hybrid approach might be ideal for tying third-party part-

ners into his CRM process (see below). Fullbright disputes the notion that his company's ASP model limits Salesforce.com to smaller operations. So far, the company's biggest deployment is 1,000 users. However, he claims that Salesforce com could handle a business with up to \$0,000 sears

But size isn't the issue when tight integration is the problem, says Leibowitz. He says that midsize companies often need to link their messaging inferstructure with their CRM operations, Leibowitz says be chose Microsoft because it has "done an extraordi narily good job of integrating its CRM with Outlook and Exchange."



Even Salesforce.com user Hernandez says he wishes his ASP's software had better real-time links to Microsoft's BizTalk, "As a Microsoft shop, that would be nice to have," he says. "But it's not a must-have,"

"Salesforce.com's product does its thing very well," says Adam Honig, president of Akibia Consulting in Westboro. Mass. "But it's a corkscrew. Siebel is a Swiss Army Knife." For example, Siebel's flexibility comes into play particularly well when you've tied in your call center operations with CRM, Honig says.

That's because call centers are subject to 'peaks and valleys" in demand, and you need to be able to handle the performance variance, he says. Benjamin Holtz, CEO of Green Beacon Solutions

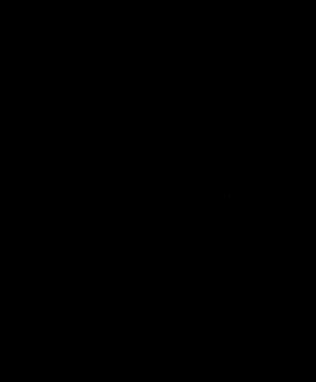
LLC in Watertown, Mass., agrees, adding that it can come down to simple issues such as being able to reboot a CRM server. "Sometimes, you just need to be able to get your arms around the boy " he says ASPs dismiss such criticism. Keith Raffle, forms

chairman of UnShot Corp., a subscription-based CRM software company recently bought by Siebel. says service-level agreements protect users from downtime and outpoes

User training is often touted as another benefit of subscription-based CRM. Tait lands Salesforce com's Web-based training and is delighted at "not having to maintain training manuals." This is particularly helpful when Salesforce.com adds features to its software, he says, But regular updates by ASPs to their

applications scare Holtz. "New stuff confuses users." he claims. "Sales guys are inherently idiots." Privacy is another concern. Although there haven't been any scandals about ASPs losing user data or having it fall into the wrong hands. IDC analyst

Robert Blumstein advises potential CRM subscribers to investigate the safeguards an ASP has in place to protect your data. "It's point to be your responsibility," he says. And privacy laws could prove to be even trickier, warns Honig, especially if you have international or medical customer data stored outside your premises. You should review HIPAA restrictions and other nations' strict privacy laws carefully before opting for an ASP. O 43211



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CRM SYSTEMS:

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Economies of Scale

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IBM eServer xSeries systems are powered by Intel Xeon processors. (And they could help stop you from buying server after server after server.)

TO Green Reason 2003, YT Woods-A Revince Court- company is the processor based somes. "Additional through supply Standard is agent mit-dain read business 60 will receive the different business and the sound of the different business and the sound of the sound of the different business and the sound of t

WEBSERVICES PUT GIS MON THE MAD

Web services enable IT to easily embed powerful geographic information system analysis and mapping capabilities in familiar end-user applications. By Robert L. Mitchell

OR EDENS & AVANT, which builds and manage shopping centers, location is everything. Building in a neighborhood with the wrong demographics for its result troants or where traffic flow or access is poor can lead to disaster, says David Beitz, securable and marketing in information

systems manager at the \$2.3 billion real estate investment firm. "The cost is tremendous if you build a shopping center somewhere and a major tenant leaves. You're going to lose a lot of

money, be says.
To ensure that doesn't happen, Beitz uses geographic information system (GIS) tools and data from Environmental Systems Research Institute Inc. (ESRI) in Rediands, Calif. By creating a geographic map and overlays that

plot customer populations and demographics, competing businesses and street and traffic patterns, Beitz can produce a visual report that decisionmakers can use. The entire process takes just a few minutes.

Today, Columbia, S.C.-based Edens & Avant purchases the underlying data and then periodically updates it. But Beltz is also experimenting with accessing current data via the Web. Using ESRTs ArcExplorer Java Edition viewer. Beltz can quelly build an amp that combines his internal data with the Javas street data with the latest street data from the US. Creasa Bireras and ousic water size data from the Environmental Processtion Agency (see Image). ESR offers "View and the Company of the Company of the Company of the Company of the "Own to developeding it you're basically viewing it." Beltz sure, so thener's no need to use a local query

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of that data

Rapidly evolving support for Web services in GIS is not only changing bow analysts access and view maps and date; vendors and analysts say it will also facilitate the integration of GIS functions into a wide range of applications. In so do doing, Web services will open up GIS to decision-makers, who will have dierct access to some capabilities that are available today only by working with a speciality.

able as Web services

"Historically, geospatial has been seen as something kind of in the basement," says George Moon, chief technology officer at Troy, NY-based Maj-info Corp. Web services can pat relevant GIS applications on the end user's desktop by embedding them within familiar applications." I don't have to understand a proprietary interface to embed code," he says,

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OPENING UP GIS

of the specification program at the Open GIS Consertium. He recently spoke with Robert L. Mitchell about the way Web services standards are ming up the world of GIS.

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OGC's specification program

"Advances in databases and analysis tools, coupled with enhanced Web capability, is bringing this to the masses." says Rob Enderle, an analyst at San Iose-based Enderle Group Microsoft Corp. is helping to broad-

en acceptance of mapping tools with ManPoint 2004, a street-mapping program that includes some demographic overlays. Users can buy the package or access MapPoint Web Services, which can be integrated into an application developer's Global Positioning System application.

Other vendors offer more sophisticated tools and are also adding Web services offerings, but "Microsoft appears to be the leader in just making things easier for Web deployment." Enderle says.

Web services extend the use of GIS by making the integration with other applications easier, according to Map-Info's Moon, "If I want to show a man to a customer in my address book, I don't have to embed that into the contact application. I can now expose that through a Web service to add value without having to [rewrite] my code base," he says.

The promise of un-to-date information is also attractive to Steve Wallace, senior strategic planner at Florida Farm Bureau Insurance Cos. in Gainesville. Fla. He uses GIS tools and data from MapInfo to qualify homeowner's policy applications and track changes in municipal boundaries.

While using Web services to gain access to regularly updated data sounds appealing, Wallace doesn't see that method ever replacing his internal GIS system. "Do I think that someooc would build a Web service to do exactly what our company needs? Not likely, Some have tried, but they are rather simple," he says

And despite the promise of GIS Web services, interoperability among GIS programs and data sources is far from seamless. "That's because the data has been defined differently. This is a big issue," says the OGC's Reed, noting that even details such as mad width can affect an analysis when combining data in overlays. "We're working with states and counties to ... deal with those differences on the fly so that the data becomes seamless," he adds

But for now, says Bern Szukalski. product manager at ESRL "those standards really aren't quite ... mature." Today, they simply provide a *lowest non denominator" for mapping and GIS functions, he says.

ESRI, the industry heavyweight with Questin 45057

OPEN GIS STANDARDS

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OpenGIS and the World Wide Web Consortium's Web services standards. including SOAP, WSDL and UDDL in products such as its miAware software for developing location-based services. "We're making sure all of our products can integrate to back-end services our own or someone else's," he says. Vendor adoption of GIS Web services is still a work in progress. But in five years, Reed predicts, access to

Moon says Mapinfo supports both

spatial services online will be as ubiquitous as Internet access is today O 43055

MAPPING THE VEHIDOR LANDSCAPE

WEB SERVICES PUT GIS ON THE MAD

Web services enable IT to easily embed powerful geographic information system analysis and mapping capabilities in familiar end-user applications. By Robert L. Mitchell

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bed code," he says.

A suite of emerging Web services standards from the Open GIS Consorbum Inc. (OGC) in Wayland, Mass., is facilitating this transition by enabling interoperability. The most heavily used of those standards. Web Map Service, Web Feature Service and the XML-based Geography Markup Language, "allow applications to access distributions."

"allow applications to access distributed spatial data across the Internet to any OGC-enabled repository," says Carl Reed, executive director of the

ANATOMY OF

I to may, as well within software version in increasement of processing the second into the self-diplerer version includes data preligible that are occessed in real between versions within the second version of the second version of the second version which is the second version of the second version of processing the second version of versions are second version of versions are second version of versions are second version processing version of versions are second version versions are versions and versions versions are versions versions





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All of the OBC medifications are publicly available, open for use by anybody, and there are no royalties

What's the benefit to enterprise (17) When someone buys into a proprictary software system, it becomes very difficult for users to add new relogies in the future. The OGC was created to bring vendors together to agree on these open interfaces.

How have OpenGIS specifications changed the way users work with GIS and mapping technology? We are seeing a rather significant increase in the use of spetial Web services. We're to appeal to specific user questions a series of spetial services that allow pole to make specific decisions You can build spatial data infrastructures - prospetially enabled portals

is security a concern with GIS Web services? I think so. As with any data holders of that information determine who should see that data. We use broader industry standards such as PICI encryption[to solve the problem]

Will OBC standards really make BIS products more open? Yes. The use of OpenGIS specifications in applications and technology products enables the imple tation of vendor

neutral plug-and-play architectures Further, many organizations have now implemented production systems, accessible via the Web, that allow users to access spatial data distributed across many organiz and stored in many formats.

These systems may rely on GIS soft ware from multiple vendors. Thus, use of an OpenGIS interface allows access manipulation and display of spatial data without expessing the format of that data or any specific vendor's algo-

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MAPPING THE VENDOR LANDSCAPE

QuickLink 43057

DV BOREST I MITCHELL

o Most Divinit The was just one of Microsoft Corn's made when is instructioned the Win dows Installer service alone with Windows 2000 nearly four years are The service. which now more on Windows VD Windows Comma 2002 on A earlier versions of Windows by way of service packs, was designed to provide muchneeded consistency to the

Windows application installation process Before Windows Installer was available, software developers created their own automated installation scripts or used third-party authorine tools to create an installation program. Each followed differont rules had a limited shifting to keep track of files also in use by other applications and had no ability at all to track shared use of nonfile recountries such Windows por-

istry keys This signation resulted in the classic problem in which one application would install a Dynamic Link Library (DLL) in the Windows system directory only to have another seplication overwrite it with a different version breaking the first application in the process. Uninstall programs likewise unknowingly removed DLLs or changed registry keys that other applica-

tions were sharing Windows Installer enforces a single set of installation rules that all compliant applications follow, including versioning rules that prevent the overwriting of oewer files with older ones. It also keeps track of all changes made to Windows, including any made to the file system

and registry keys. For Installer to most coft. ware developers must penlace traditional installation scripts with Windows Installer packone files (called MSI files of ter the file extension). And since Windows Installer can track only installations that follow the MSI format end users will reap the full benefits only when all applications in-

Windows Installer

DITINITION

Windows Installer is a Windows service that allows applications to be installed cleanly and consistently and tracks the use of system resources to minimize conflicts.

stalled on a Windows machine support Windows Installer. An .MSI package functions se a emall relational database with fields containing all of the information and instructions that Windows Installer needs to successfully deploy an application. At runtime. Windows Installer converts the MSI data into an install script and an uninstall script This allows for a graceful rollback of the application and restoration of the system to its

previous state if an in stall fails. For example, if an upgrade to Office Sustem fails the sextem can roll back to the previously installed Office XP version and the user can continue working - something that

didn't always hannen before The .MSI breaks the installation data into three parts (see diagram). This architecture enables it to install appli cations without ever having to manage individual resources

directly. Instead, it groups registry keys, files and other resuch as the Speller Foring in Microsoft Office Components group together interdependent resources such as an executable program file and the registry key that holds license information

Windows Installer tracks all

changes made to the system during the installation at the component level and keeps "nofcounts" that tell how many applications share a given component It also assigns each component a globally unique identifier (called a

How Windows Installer

Packages an Application

GUID or "gwid") and a keypath, which Windows uses to identify the component. By maintaining refcounts at the component level rather than for each individual resource. Windows Installer can easily track all shared resources, not just files DI I s and other resources are deleted only when the last component that uses them is deleted

The MSI package groups components into features These are the user-recognizable chunks of an application including options that users nee about to impall such as Word in the Office suite. Subfeatures, such as a spell checkor can be nested within a large er feasure for more granular control of the installation process Festures can share components, and they allow more installation ontions than do scripted installs. With MSL features can be installed to nin locally to me from a recondary location such as a product CD, or they can be advertised," appearing in an

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stalling only when the user invokes the feature. All of the features that make up an annlication are then aggregated into a single MSI file.

Management API Windows Installer also in-

cluder a management application programming interface (API) that it uses to keep track of installed products, features, components and keynoth data Using this API, an application management tool can repair a broken application. Through the APL it can determine which component isn't working and reinstall just that comnonent and its associated to sources, rather than the entire application

Administrators can customize the MSI nackage by creating a complementary transform (or MST) file The transform can provide answers to Windows Installer when the MSI file calls for user input. such as choosing which ontions to install or the correct installation path. It can also remove unwanted features from the basic installation Software vendors have been slow to adopt the .MSI format. Nearly four years after Windows Installer's release many applications still use non-MSI installation routines. To get the full benefits of Installer. enterprise administrators have turned to automated application packaging tools [Quick-

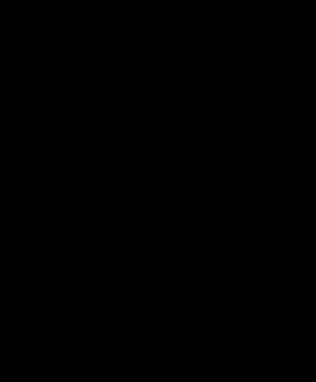
link 42711). Such tools can ereate .MSI packages for noocompliant applications as well as build transforms for existing packages. For most other users however the legacy of installation conflicts will linzer until every noncompli ant Windows application on the deskton has been undated.

Microsoft says Windows treater 30 and

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have features served at enhanced security QuickLink 43357

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seoft says Windows Iretailer 30 will e leatures aimed at enhanced security

Chaos

The right management can put you in control of your infrastructure, not the other way around.

Unicenter* Infrastructure Management Software

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Good Firewalls Make Good Neighbors

Erecting internal security fences can stop attacks from spreading between corporate divisions - if you can get the rules right. **By Vince Tuesday**

EVE DECIDED that as a corporate subsidiary it's time to leave home and strike out on our own from an IT security perspective. Historically, because the parent organization owns us, we have trusted them completely. We have some 10 connections with no controls between our net-

works and theirs This arrangemen has worked well until now so we have? done very much mor itoring on the links between our networks. But we been to question this arrangement

when the SQL Slammer worm infected our network recently. Their group feels pretty certain that we infected them. and my team thinks the opposite. Either way, going forward we need protections to make sure this can't happen again. The simplest way to keep

malicious code from spreading between our networks is to deploy firewalls and config ure them so they limit traffic to what's needed and block everything else. So we announced our intentions to ou colleagues and proceeded with the deployment. They weren't upset, since they feel that they will be protected from us.

Setting Up

Our first step was to identify all of the network links between our organizations. That was easy, but there were more than I expected. I think we found them all, but it will be interesting to see if we flush out any more links

Once we had found the

I physical connections it was a simple task to deploy the hardware firewalls. In fact, we surprised our parent company because we spent significant effort educating them that this was coming so they could help us with the rules. Once their key decision-makers gave us the green light, we

went ahead with the deployment. We completed the work while the other group was still informing its IT troops that this had been approved. Putting the band-

ware in place is the expensive part, but that alone doesn't give you any protection. For that you need a wellthoughtwest rule base that limits high-risk connections while allowing businesscritical traffic to flow freely

Our first approach was to enable intrusion-prevention system capabilities within the firewall. Firewall vendors out a great marketing spin on this feature: "You don't need an expensive burglar alarm to tell you about break-ins on your network because our Grewall

Our grand plan of protecting 'us' from 'them' and vice versa has now

been split into two phases.

just stops them all dead." I haven't done a wide majew of intrusion-prevention systems in Grewalls, but with our firewalls, it's pretty much rubbish. It will successfully identify and stop only about 20 known attacks. The list of attacks is built into the firmuall operating system rather than using

tivirus software does I suppose we'll be safe if Kevin Mitnick returns to his naughty ways but doesn't update any of his attacks from the early '90s. But giveo all the new attacks that the firewall won't stop, including Blaster and even Slammer. the fact that it protects us from risks like the ICMP ping of death isn't much to write home shout

signature undates like our an-

The Good and the Bad For real protection, we needed rules that filter had traffic and let the good get through. We thought the good would be easy to define. We talked to ing the Web and e-mail trams

each application owner, includ-Once we had the addresses of their servers and the protocols they wanted to use, we could add rules to allow that and steadily work at the rest until we could add a default deov rule and provide protection from unknown threats. We were about 24 house

away from enabling the first set of suler when we naisely asked what would happen if one of the connections went down. Does the traffic route via one of the other connections to the parent? If it does, then we'd need to make sure that the rules would let the links still work once recouted. Ed hate to have the firewalls block critical traffic in a disaster recovery situation. Nobody knew the answer. We had no idea what would

hannen if a link went down and we didn't want to test live connections. But we couldn't anable the rules until we know the answer, so we went back to the drawing board

Even though we couldn't know for certain what good traffic would do, I thought we could at least limit damage from unknown protocols.

There must be many IP protocols and TCP ports that aren't used oo our network. If we blocked those, then weaknesses in our existing services might be exposed, but we'd ontice if an attacker tried to add or use a new protocol As we worked on generating

that list and informing people that we would be putting the first deny rules in I started asking my contacts in the industry about our plan. Putting firewalls on internal network segments is hardly an original idea, so I figured that the problem of generating rule sets and reducing the risk of attack while keeping the business soine must be a common. one with well-known fixes Sadly, the typical responses I not were, "Oh, that's a hard

a good way to do this I wel-Now, as we uncover problem after problem, I've reduced the project's scope to keep it on track. Our grand plan of protecting "us" from "them" and vice versa has now been split into two phases. Phase I will just deliver protection of our systems from

their networks by limiting inbound connections. Outbound connections will be left untouched. This reduced scope significantly reduces our work and will still keep our bosses. happy. I guess the final stage of leaving home is to learn to let home get on without you b

WHAT DO YOU THINKS



Out of Space

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Tons of Space

IRM Enhances Grid Offerings . . .

BM Global Services last week d its grid comput m with services de in, as well as an imp

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Deal With Quantum ISM assourced last week that it will ship Quantum Corp.'s DLT VS180 tage drive with its er affectes to contomer IBM's 40/8000 DET h tame drive in the entry fort, said Son Jess-

Microsoft Undates **CRM Software**

of Corn. lest week an on 1.2 of its CRM and ro. The company launch

WetStone Upgrades ts Stego Suite

ROBERT L. MITCHELL *

Dawn of the Undead Data

N GEORGE ROMERO'S classic 1968 horror film. Night of the Living Dead, the deceased rose from their graves to terrorize the living. Many IT organizations now find themselves in a similar

nightmare as data they thought was dead and gone has risen from the storage crypt. When hackers. competitors or governments apply the right technolof the evoteme it mulity still

ogies, the data you thought you had destroyed, and which has stumbled outside the corporate gates on discarded PC hard disk drives. backup tapes and other zombie media, comes alive again. And opportunists are quick to use this data to extract their pound of flesh.

Take the case of the insurer that thought it had wiped the hard drives on retired PCs clean before disposing of them. Someone who bought one of those PCs and discovered sensitive data on it is blackmoiling the company, says Bob Houghton, president of Redemtech Inc., a Hilli-

ard, Ohio-based recycler of PCs and other IT products. And since the breach involved customer data, the company must disclose it to its customers under a California privacy law The IT staff may have simply over-

looked erasing that PC in the disposal process. But the true horror is that in many cases, even wiped data on those 1,000 PCs you just sent out the door can be resuscitated.

And third-party veodors that claim to wipe PC disks before disposing of them don't always do the job right. either. One IT executive at a large financial services company outsourced the task to four different vendors. Now she's in litigation with three of them, according to Gartner analyst

Redemtech says that on average, 25%

have data on them even though IT thought the systems had been wiped clean. IT managers don't realize that their own best practices, if they have them, aren't being followed. And eveo when they are, the erasure process may simply transport the data to the land of the undead.

Consider the options. An fdisk breaks the partition but leaves data on the drive that any disk utility can read. A quick format only overwrites the system area of the disk. A low-level format overwrites most data in sectors accessible by the operating system but leaves maoy areas untouched. Consumergrade disk-wiping tools supposedly overwrite every sector, but data re-

covery specialists say they ofteo retrieve data that these tools have left behind. Then there's decaussing - applying a strong magnetic field to the disk to crase it. This works well for backup tanes but many decouseers aren't powerful enough to erase newer hard disk drives. And since degaussing renders the drive inoperable, there's no

easy way to verify erasure. Redemtech and others use specialized tools to erase disk drives. Their technicians boot a custom utility from a DOS diskette or CD, and the software addresses the IDE or SCSI disk controller circuitry directly, bypassing

the operating system installed on the target hard disk drive. But even then data rombies lurk in the shadows A disk drive head is smaller than the track within which it must write It plays along the truck like a lune sled, leaving its mark through the ceoter while spraying some data up leaves much of this roadside data in-

along the sides. A single erasure pass tact - a pheoomenon called residual magnetism. Although the data is now out of the realm of easy recovery, if it's valuable enough - say, the recipe for Coca-Cola or an early earnings report - organizations with the right resources may take a shot at it. The process involves removing the platters from the disk drive and using very expensive equipment to access the residual data To minimize this risk, disposal firms dealing with sensitive data make at

least three crasure passes, and sometimes seven or more, to wash away as much residual data as possible. At that point, mere mortals probably can't retrieve your data. "The NSA would still be able to recover data off that drive. They have very sophisticated equipmeot," claims Tony Thornton, Redemtech's MIS IT director. Then again, if the National Security Agency is reading your media, you probably have much bigger problems Io the end, there's only one way to

know for certain that your data won't rise again: Physically shred hard disk drives and other storage media. But the correct action to take depends on the risk. For most PCs, a multipass erasure will suffice. But if the process doesn't include an audit trail with specific snapshots of the sectors that verify erasure, be prepared to see your data rise again. O 43381

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MANAGEMENT

Offshore Dilemma

Should you send technical support work overseas? The Financial Services Technology Consortium is looking into the best practices for this niche market. Page 41



Taming the Wild, Wild West Barbara Gomolski predicts a flood of IT project requests from business

units in 2004, and she offers tips on how to figure out when to say yes and when to say oo. Page 46

Rust Belt CRM

Manufacturers are using sophisticated software that analyzes customer profitability so they can provide better service to high-profit customers and charge higher prices for low-profit orders. Page 42



LITTLE OVER A YEAR AGO, whoo I fenile Consumer Adhesives Inc. needed to replace its warehouse management system, the company choose a forward-thinking vendor that was planning to use radio frequency identification, or RFID, which was then, as now, being touted as the "next great thing" in supply chair automation.

Little did executives at Avon, Ohiobased Henkel know that just a year latet, thanks to a mandate that Wal-Mart Stores Inc. issued to its top 100 suppliers, they would be planning a pilot based on this costly and still problematic technology, with the intention of going live by Jensury 2005.

RFID is forecast to be a \$3 billion at market within five years as this sophis-

ticated tracking technology gradually begins replacing its cheaper but less powerful predocessor, the bar code. Compared with bar codes, RED tags store more information about the products or containers they're placed on. And they doo'r require mismual scanning.—RFID readers capture data automatically when tagged thems or

containers are within a certain reagn.

On a neeriving dock an entire pulse could be read all at once, increasing productivity, reducing labor costs an efficient and effi

lacturers, it enables realtime tracking of goods, resulting in usprecedented visibility into the supply chain, thus reducing shriniage, idle inventory and out-of-stock items. Fast-selling items can be replenished more quickly, increasing revenue for both suppliers and retailers. Large retailers such as Benetton and Marks & Geomer claim returns on their

Large retailers such as Benetton and Marks & Spencer claim returns on their RFID investments, and Wal-Mart predicts 10% to 20% improvements in labor efficiencies in its distribution centers. However, the vast majority of suppliers will take at least two years to see any return from their RPID implementations, observers say, in fact, if the Wal-Mart mandate hadr's occurred, analysts say RPID would likely have followed an adoption and maturation cycle similar to that of bar codes, which took at least a decade to achieve

which took at least a decade to achieve widespread adoption.

AMR Research Inc. in Boston estimates that suppliers will spend \$10 million to \$20 million each to meet Wal-

Mart's mandate, including hardware, engineering services and integration with existing software. ARC Advisory Group Inc. in Dedham, Mass, puts the cost at \$250 million. Either way, "it's clear that the payback far longer than two years," says'

will be far longer than two years," says' Steve Banker, service director of supply chain management at ARC Indeed, although Henkel anticipates great benefits — including reduced inventory, better manufacturing planning, reduced cycle time and, ultimately, bigher sales, "we might have moved at a different name," if its weeps? for

Wai-Mart, acknowledges Gene E.
Obrock, vice president of operations at
Henkel, best known for its Duck brand
of duct tape. An ROI model, Obrock
says, isn't even relevant at this point.
"The technology is so new that even if
we set up an ROI analysis today, in a
year we'd be developing a whole new
ROI model and still revisiting it frequently,' be say.

"If you're being forced to do it, then you have to do it," concurs Barry Mason, an analyst at Nucleus Research Inc. "Others — while they should take this technology seriously — need to take a wair-and-see approach."

Overcoming Complexity
One way to lower costs is to delay bulk
tag purchasing until prices drop, which
many, including Obrock, see as inevitable, particularly with the billions
of tags Wal-Marr's suppliers will de-

Smart Tags, **High** Costs

RFID technology is hot, but the costs and complexity mean that ROI for suppliers is a long way off. **By Mary Brandel**

mand. With tars costing 30 cents on mergee only certain products watches, DVDs, CDs, for instance would be worth tagging According to Corrner Inc. the cost

of tags will have to fall to 10 cents each before the price is right for pallet, and container-level tagging, and it will have to bit 5 cents for item-level tapgine to be affordable. Some observers predict 5-cent tags by 2006, but others

But tag costs are only the beginning. Consider if a supplier simply complied with Wal-Marr's mandate - what some call the "slap and ship" model. In this approach, suppliers would rar containers right before they lesse the warehouse, not when they come off the manufacturing line. This means that when a truck arrives at the warehouse. the containers destined for Wal-Mart need to be segregated, sent to special tar-printing stations and placed on separate pollets. "You're rearranging the warehouse to accommodate this how much will that cost?" Banker says.

Furthermore, older warehouse management systems will have to be customized, which can cost \$50,000 or more. Special middleware will need to be added to accept, sort and translate the new RFID data for the warehouse management system and to process advance shipping notices in a new format "Believe it or not, this is the cheap path," Banker says.

The other approach is to push RFID further back into the manufacturing process receiper containers before these reach the warehouse or even requesting your own suppliers to adopt RFID. This way, suppliers can reduce labor costs at the receiving dock and speed shipping processes. But it's questionable whether this offers a cumoclline

four a four-level most map, save John

iers and their suppliers.

At Level 2. RFID is applied to two or

more units within a company. For example, a large agreement manufacturer used RFIO

ROI for many suppliers, which - unlike retailers - may already operate at high levels of inventory accuracy. "If they're at 99% efficiency now and DEID brittes them to 00 %, that in no. way offsets costs," says John Fontanella vice president at AMR

Wal-Mart itself is encouraging suppliers to do more than slan and ship. -Van how to conture the information and out it back into the system to make better devisions." Obrock says, "If you do it any other way, you're short-cuttime your ability to concrate savines." Of course this adds more interestion costs and requires a re-engineering of business processes - still with no short-term POL for Henkel funitine out how to do that will likely take the better part of six months. "We'll be looking at where the technology fits. what applications we want to take adcontains of what procedural change we'll need to make and what those

changes mean in terms of cost say-Where RFID Works Best Still Fontanella and others say there way to both comply with Wal-Mart

ings," Obrock says

and achieve shorter-term payback, It involves looking within your company and defiming a discrete process that could benefit from RFID automation Fontanella suggests considering an area where process discipline is very important yet difficult to achieve manually. For example, International Paper Co., had problems reading for codes on its massive rolls of paper when the rolls were stacked deeply. In addition. when rolls were cut to fill an order, the bar code was sometimes cur with them, leaving partial rolls with no indi-

cation of their grade or the amount left. Stamford, Conn.-based Interna-A Four-Step Process

AL ADOPTION OF REID will folway and therefore installed RFID readers at customer sites to receiler consumption of Fontanella, an analyst at AMR Research At Level 4, RFID is used by virtually all # Level 1 includes discrete RFID applications like those being piloted at some large supply chem perticipants throughout an industry, which is what Wal-Mart is atternating

to bring about. As Fontanella soes it, "such a vision is well beyond the capabilities of current technoloov. Instead of a natural evolution of 20 to 25 years. Wid-Mart is making it five wors. "Indeed, within one year's time. Hankel will atterret to push RFID into its own manufactur

ing siles and out to one or two suppliers, in ion to complying with Wal-Mart. - Mary Brande # 18% said they use REID

12% said they have plans to implement RFID in the year luture.

II 70th raid than how no plant to un-= 69% of those that aren't using REID said the cost needs to co # 25% of those that aren't worm it = 24% of all respondents said three have customers using RFID, and 27%

said they have suppliers using it. tional Paner inserted RFID tops deep within the rolls, thus increasing inventory accuracy, eliminating waste, pe-

ducing operating costs and decreasing inventory levels. Sometimes the environment itself calls for RFID, International Paper's warehouse, for instance, is very dusty. making bar-code reading difficult. There are other rules of thumb to consider when looking for processes that would benefit from RFID. For one thing experts advise looking for activi-

ties that involve a lot of manual labor - if you have 500 employees using bar code readers to scan tens of thousands of packages each day, for example, Another pussibility is order picking "If a shipper needs to pick three of one product, eacht of another and 10 of an-

other and put it on a pallet, with a reader mounted right on the equipment as the person is filling the order, it can ensure the person isn't counting wrong," Mason says. Large or high-value goods are also

good candidates for RFID tracking because they yield better ROI than lowvalue goods, since the per-tag cost is less of an issue. Plus, Banker points out that better asset management helps reduce theft

And one way to track high-value goods is by their containers. TrenStar. a mobile asset management firm that uses RFID to help companies such as beer distributors in the UK track their containers as they move through the supply chain, chooses to use RFID when the container itself is valuable "It's more worthwhile to track a conturner that costs \$1,700 than a cardboard hoy " says David Adams senior vice president of corporate strategy at the Englewood, Colo-based company, TreeStar claims to have decreased cvcle time for beer distributors and cut ker loss by two-thinds And low-cost goods can have high

value when they hold a key place in a manufacturing process. Adams points out. For instance, a container of 39cent spark plues might cost \$4 but if the part doesn't arrive at the right point in the manufacturing process, "it could shut down the whole plant," he cour TeneStar has been conduction a pilot at Kraft Foods Inc. in which it manages the process of sending stainless steel containers to Kraft suppliers. to fill with processed fruit for sugget Because the containers are tagged. Keaft can look on a TrenStar Web to learn where the containers are and when they will arrive at its plant. With this information. Kraft can plan pro-

duction runs more accurately Some of these applications may call for more expensive and more mature RFID technology such as active tops or those with proprietary standards - not the passive tars Wal-Mart is mandatime.

Unexpected Benefits

Despite the lone-term ROL as suppliers experiment with RFID, Fontanella.

believes innovative uses of the technology will emerge. Indeed ROI can come from unexpected places. Adams points out that because his been browing clients were able to produce audit trails of where their kees had been they more able to receive a tay could for the ullage, or waste beer at the bottom of the empty keg. And in the end, companies like

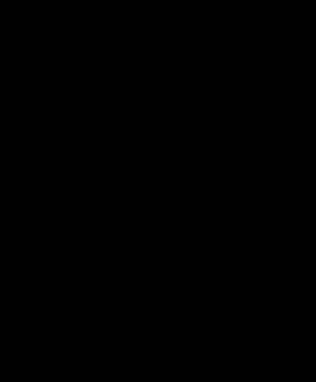
Henkel say they are glad to be investing in innovative technology now "Why not challenge ourselves by getting on the front end of this thing, while people are still sharing information?" Obrock says, "A year or two from now, companies that have per fected their use of RFID technology won't be talking about it - they'll be using it for competitive advantage, and those that aren't on board will be experimenting in the dark." O 43198

Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandeli@comcast.net.

RELIABILITY ISSUES

within \$100 years personne and consister to all works

tags to monitor the flow of material from iving to its graduction line. * At Level 3, compenies coordinate RFIDd processes with a limited number of supply chain participants. For example, a cturer was unable to do ged inventory in a traditional



mand With two costine 30 cents on average, only certain products watches DVDs CDs for instance would be worth tagging.

According to Gartner Inc., the cost of tags will have to fall to 10 cents each before the price is right for pallet- and container-level tagging, and it will have to hit 5 cents for item-level tagging to be affordable. Some observers predict 5-cent tars by 2006, but others

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consider when looking for processes that would benefit from RFID. For one thing, experts advise looking for activities that involve a lot of manual labor - if you have 500 employees using bar code readers to scan tens of thousands of packages each day, for example,

Another possibility is order-picking. "If a shipper needs to pick three of one product, eight of another and 10 of another and put it on a pollet, with a reader mounted right on the equipment as the person is filling the order,

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And in the end, companies like Henkel say they are glad to be investing in innovative technology now. "Why not challenge ourselves by getting on the front end of this thing. while people are still sharing information?" Obrock says. "A year or two from now, companies that have perfected their use of RFID technology won't be talking about it - they'll be using it for competitive advantage, and

those that aren't on board will be experimenting in the dark." O 43398 Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.

RELIABILITY ISSUES

Ottshore

Sending technical support overseas is attractive, but it could expose production systems to new risks. By Patrick Thibodeau

MANAGERS have gotten very comfortable moving application development and main-tenance to offshore providers. And offshore outsourcing of business processes, such as claims processing, is growing rapidly too. But one area of outsourcing that hasn't caught on yet is offshore sechnical sunport for IT systems and infrastructure. Simply put, the jobs of technical sup-

port personnel and systems admin trators who work on real-time IT applications could be done remotely over a network connection to the system. For example, if a problem arises wit

CRM application, the trosbleshooting and repair could be performed by workers in India. Server capacity management, network management and database and firewall administration are all functions that could be handled

But today, offshore support for production IT systems is a niche market, and because it's new, best practices haven't emerged. Users are cautious given that this type of outsourcing involves access to mission-critical pro-duction systems and raises new concerns about issues such as security. privacy and intellectual property pro tection. Plus, once a company decides to shift its application and syst support to an overseas vendor, it will

lose in-house expertise in those skills. Infrastructure outsourcing is *a ong-term decision - it's not easy to take it back," says G.K. Prasanna, who manages infrastructure services at Bangalore, India-based Wipro Ltd., a major overseas outsourcer.

Developing Best Practices The financial services industry, which has been aggressive about using offshore IT services, recently began an effort through the Financial Services

Technology Consortium (FSTC) in New York to develop a set of best practices for moving production and infrastructure support offshore. Outsourcing application development is "fairly easy there is no access into produc-

tion systems," says Jim Salters, director of technology initiatives and project development at the FSTC. Faced with the new challenges of outsourcing technical support, the FSTC is developing an implementation playbook and hopes to have an initial version com-

pleted before the new year. Stan Lepeak, an analyst at Meta Group Inc., says it's always a good idea for end users to band together to develop best practices, though he wonders how much information the competing financial services firms will be ng to share with one another. Guidelines that make compani

more comfortable with outsourcing technical support could beln increase the use of offshore IT services. But the complexities uncovered by the ECTC's effort could also have the opposite effect and slow down the market "h could lead them to the conclusion that this is a three- to five- to seven-wear initiative" just to come up with the best practices, Lepeak says.

Standardizing Processes

Financial services firms are supporting the FSTC effort because without some kind of industry standards, "each bank ends up inventing their own processes." says an IT official at a major bank who asked not to be identified

The FSTC is looking at issues like how to protect confidential data - such as trade secrets and customer information - from being disclosed or stolen by competitors, the outsourcing contractor or the contractor's employees. Legal experts say the only way users can ensure that their interests are pro-

tected is to take oothing for granted Penetration testing of a vendor's security processes and detailed background checks on employees will be needed. The Federal Deposit Insurance Corp., for instance, prohibits financial

services firms from hiring people with certain types of criminal convictions, and those restrictions also apply to people managing the systems of FDICinsured banks overseas.

Some offshore providers, in an effort to reassure U.S. firms about their security standards, set strict rules about what their employees can bring into work, prohibiting them from carrying in laptops, handhelds and cell phones - anything that can be used to steel a company's intellectual property. Advances in another IT arena may help make offshore outsourcing of

technical support more feasible. Privacy laws have sourced the development of data-masking technologies that can disguise customers' personal data These technologies can also protect data handled by offshore contractors. *Once I do that [data masking], I've opened the door to make it easier to en offshore," the bank TT official saw

Outsourcing parties also need to find ways to prevent trade secrets from falling into the hands of competitors. That could mean prohibiting an outsourcer from working with competitors or finding methods to segregate the work, said Marina Gracias, deputy general counsel at Providian Bancorp Services in San Francisco, at a recent conference. Another step is to prohibit an outsourcer's employees from seeking work with a competing company for a period of time, she said

Infrastructure outsourcing is possible only because of the growing reliability of global networks which make it possible for systems to be managed remotely over yest distances. While the telecommunications infrastructure is improving in many low-ware countries, it's far from perfect, and outsourcing experts say it could remain a hurdle for some companies in man-

aging real-time systems. But as long as a financial case can be made for moving relatively routine iohs offshore, the pressure on compa

nies to take that step will be brage Mark Mayo, a partner at TPL an outsourcing consultancy in The Woodlands, Texas, says 40% of the outsour ing deals TPI has been involved in this year have included some offshore component. Mayo says that may increase to 60% next year, adding that the outsourcing of infrastructure support will be one of the reasons for this growth.



HESK OF CRM, and you tend to think of retailers, banks and call centers serving mass-market consumers. But CRM software is quaetby being used in the industrial heartland, now, to better manage sales of products ranging

from steel plates to factory controls.

Manufacturers are beginning to take advantage of CRM data systems to fine-tune their factory forecasts and identify their most profitable products and customers. Then they can unprove service to those customers—for example, by providing what essentially is an expension or preferred status on the

assembly line, See huly-profit orders. Smokestic industries are even ussing buffed-up CRM systems to itself; higher prices for low-profit orders. Sophissicated tools that analyze customer profitability can highlight so called free riders, or customers and products that generate a disproportionately small return, says Seeve Banker, an anatyst at Automation Research Core, in

Dedham, Mass. CRM analysis sometimes yields surprises and upsers long-held planning assumptions, Banker notes. For example, a high-margin account could lose its preferred status if analysis reveals that the customer has costly handling or service requirements. Likewise, custom features or unforolvine delivery



Manufacturers like U.S. Steel are majorg benefts from CRM software, such as increased cash flow, better service for highly profitable customers and more accurate forecasting.

deadlines that disrups production or shipping schedules might diminish the appeal and profitability of a once highly regarded customer. The payoff from exploiting this kind

The payoff from exploiting this kind duate can be huge: U.S. Steel Corp. of ficials say the company increased its annual cash flow by several million dollars soon after installing analytic CRM software from San Rafiel, Calif-based Maxager Technology Inc. In fact, CRM initiatives a some industrial companies — including Daimeterbrusker AG. Ondon Nator Go. and

Heavy industries are using CRM data to speed up the assembly line for high-profit customers and charge higher prices for low-profit orders. By Ira Breskin

Rust Belt CRM Taiwan Semiconductor Manufacturing Co. — produce such important insights that they're considered too proprietary to discuss publicly, for fear of tipping

off competitors.
Invensys PLC, a conglomerate that
makes a full range of inclustrial contreks, has begun using CRM data about
customer ordering patterns to better
exchading at its focusions, says global
best practices program manager Del
Kumpf, who works at the company's
U.S. bacalquarters in festores, Mans,
"A mijor better fit has been on better
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to recordate from, Namer's Serve.

Invensys uses heavily customized Brain CRM software, which is based napplications Brain required when it purchased CRM wendor Aurum in May 1997. (The selection isn't too surprising Invensys purchased Brain in August 2000 and then sold it in June of this wer to SSA Global Technologies Inc.)

Invenoys factories use CBM data to more accurately forecast needs for raw materials six months out. Forecasts are updated either weekly or monthly. Precision is important because Invensys' production is done on a just-in-time basis; work is scheduled to coincide with customer-specified delivery dates, and the company holds minimal fintible-leaseds inventors.

Investigation uses CRM to make user it evaluates the princibility and risks associated with major contract bids, to avoid too many low-profit or high-prins, this bids. The goal is to make the sales process more consistent. Kumpf asys, And, like other CRM adapters, livening you must the system to he should be a condicited for a manifectation control to the condicited for a manifectation control to condicite for a manifectation control to world be condicited for a manifectation control to world be for livening because the vender would be familiar with the reliability of the customer's system, since the balt musch of the head to be controlled for the con

with the renaminary of the customers of system, since it built much of the hardware and provided the control software.

"We're trying to leverage actual sales data to sell as much and as many different invensys products as possible,"

Kumpf explains. "It's really opportunity management."

'Contracting Smarter' U.S. Steel's activity-based costing soft-

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curvince production managers and its 150-member sales force to focus on maximizing cash generation and, ultimately, profit, not simply revenue. In fact, U.S. Steel now is 'contracting smarrer' by accepting only short-term orders that take three to six months for low-profit products, Shapkaroff said during a recent presentation in Boston.

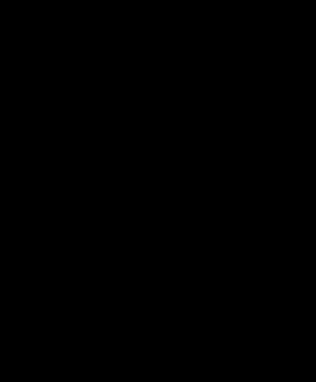
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This sort of customer profitability analysis is all the rape in the financial services industry, according to recent reports by Garmer Inc., but it's happening — quietly — in the Rust Belt,

too. **C43064**

Breskin is a freelancer writer in Great Neck NY



HINE OF CRM, and you tend to think of retailers, banks and call centers serving ass-market con But CPM software is quiet. ly being used in the indeetrial heartland too to better manage sales of products ranging

from steel plates to factory controls. Manufacturers are beginning to take advantage of CRM data systems to finenine their factory forecasts and identify their most profitable products and customers. Then they can improve service to those customers — for example, by providing what essentially is an "express lane," or preferred status on the

assembly line, for high-profit orders. Smokestack industries are even using buffed-up CRM systems to justify higher prices for low-profit orders. Sophisticated tools that analyze customer profitability can highlight so-called free riders, or customers and products that generate a disproportionately small return, says Steve Banker, an anahut at Automation Research Corn in Dedham, Mass.

CRM analysis sometimes yields surprises and upsets long-held planning assumptions, Banker notes, For example, a high-margin account could lose its preferred status if analysis reveals that the customer has costly handling or service requirements. Likewise, custom features or unforviving delivery



deadlines that disrupt production or shipping schedules might diminish the anneal and profitability of a once highly regarded customer.

The payoff from exploiting this kind of data can be huge: U.S. Steel Corn. of ficials say the company increased its annual cash flow by several million dollars soon after installing analytic CRM software from San Rafael, Califbased Maxager Technology Inc. In fact, CRM initiatives at some industrial companies - including DaimlerChrysler AG. Ondeo Nalco Co. and

Heavy industries are using CRM data to speed up the assembly line for high-profit customers and charge higher prices for low-profit orders. By Ira Breskin

Rust Be

Taken Semiconductor Manufacturing Co. - produce such important insights that they're considered too proprietary to discuss publicly, for fear of tipping off competitors

Invenere PLC a conclomerate that makes a full range of industrial controls, has begun using CRM data about customer ordering patterns to better forecast production and fine-tune scheduling at its factories, says global best practices program manager Deb Kumof who works at the company's U.S. headquarters in Foxboro, Mass.

"A major benefit has been to better forecast what our hosiness is ening to be and [then] transfer that information

to production," Kumpf says. Invensys uses heavily customized Baan CRM software, which is based on applications Baan acquired when it purchased CRM yendor Aurym in Mau 1997 (The selection isn't too surprising Invensys purchased Baan in August 2000 and then sold it in June of this

year to SSA Global Technologies Inc.) Inventor factories use CRM data to more accurately forecast needs for raw materials six months out. Forecasts are undated either weekly or monthly. Precisioo is important because Invensys' production is done on a just-in-time basis; work is scheduled to coincide with customer-specified delivery dates. and the company holds minimal finished-goods inventory

Invensys also uses CRM to make sure it evaluates the profitability and risks associated with major contract bids, to avoid too many low-profit or high-risk bids. "The goal is to make the sales process more consistent." Kumpf says. And like other CRM adopters, Invensys uses the system to identify cross selling opportunities. For example, a factory controls customer would be a candidate for a maintenance contract. It would represent a low risk for Invensys because the wendor would be familiar with the reliability of the customer's

system, since it built much of the hardware and provided the control software. "We're trying to leverage actual sales data to sell as much and as many different Invensys products as possible." Kumpf explains. "It's really opportunity management."

'Contracting Smarter' U.S. Steel's activity-based costing soft-

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Unintended

Research shows that well-meaning managers aren't guite as unbiased and ethical as they think they are



you may not be as ethical as you think you are save Mahzarin R. Beneji, a professor of social ethics at Harward University. issue of Harvard Decimace Design she and counthors

and Dolly Chugh write that most managers are burdened with unconscious biases that often result in unintrationally unothical decisions Benefit discoursed these bioses with Var b. levn Melvmuka and offered suppostions for minimizing their impact

You say most managers aren't as ethical as they think they are. Why not? Most people are not as othical as they think they are because there are constraints on ethics that are not visible to the conscious mend, and even if they are, may not be easily controlled. All behavior, including behavior that has ethical implications, can be guided by thoughts and feelings that reside in unconscious form. Managers are no different, except that their attitudes and behavior have greater impact on others because of their role

You talk about a number of sources of unintentionally unethical decision-making. Let's start with implicit projudice. Can you give me an example in an IT setting? An amplicit bus that may flourish in an IT setting may concern gender. If the ascontintion is that man are better as FT

than women are that may lead to men being selected for such positions mure often than women, being given posttions of higher responsibility and retained with greater confidence.

Yet you say implicit prejudice is rooted in the fundamental mechanics of thought. Can you explain? I refer to the type of bias we study as "undinary prejudice" to distinmish it from conscious hiss It's onlinary in two ways. First, prejudice seemingly a thing of the heart - is rooted in the fundamental mental mechanisms of perceiving, categoriz-

ing and remembering. To categorize, for example, is a basic skill without which we could not tell apart things that belong to different families say apples and oranges. To be able to do this is central to thinking. And this mechanism is involved in seeing that people belong to different social groups - male and female, young and old, rich and poor, etc. It is in this sense that I say that prejudice has its origins or roots in the ordinary mechanics of thought. The second sense in which I might use the term ordinory is related. If (implicit prejudice) is rooted in the fundamental mechanics of thought, then it should be visible in all of us, not just a minority that may also be consciously biased.

Another source of bad decisions is in-group favoritism. What's wrong with putting in a good word for a friend? It's not that putting in a good word for a friend is wrong it's the simultaneous lack of putting in a good word for others that makes the playing field unequal. It's the relatively greater access to economic and social benefits that accrue from unequal in-group favoritism that makes in-group favoritism problematic. If this attribute of being recommended were equally distributed on h that all people equally got recommended by all others we would have noth ing to say here. It is because this benefit of being recommended is yenmuch a function of where in society one sits that the simple act of recommending becomes discriminatory.

You also say people subconsciously give themselves too much credit. What's the danper of that in an IT setting? To the extent that much of IT work is collaborative. i.e., teams of neurle working together. taking more credit for work than is correct can cause fother team members to feell disaffection and a sense of being unrecognized.

Finally there's conflict of interest That seems pretty unethical. How can it be unin tentional? We are not speaking about intentional conflict of interest that is where people explicitly use the power they have in one context to gain favor in another. We are instead concerned about conflict of interest that may occur more subtly, for example, where a person stands to gain because of the

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more distant affiliations that play a Here, identifying situations that may lead to conflict of interest, even though they are "required" to be treated that way is the progressive way to think

How can an IT manager deal with these ethical lapses if he's not even conscious of them? Act affirmatively to combat discrimination), not because the group has been wronged in the post but because the harm from implicit bias is a thing of the present. We also say some more specific things about shaping one's conscious attitudes that can trickle down to the implicit

level with practice - and shaping the

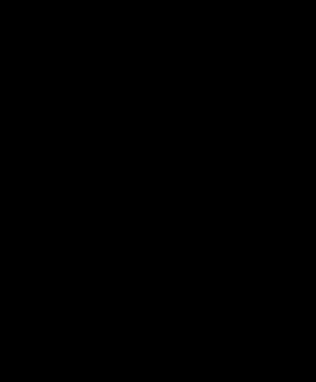
environment.

Can you explain and give me some advice on the strategy of chaping an IT environment? A diverse workforce does this in the most obvious way. It allows daily associations of good and bad to be made to many different types of people, blurring the simple association of only one type of association with a group. If Firm A has 20 Asise women and Firm B has two, the employees of Firm A

have a higher likelihood of stereotypes of Asian women bring disconfirmed Ultimately, you say, "vigilence even more than intention is a defining characteristic of the ethical manager." What do you mean by that? Good intentions doo't always protect us. Vigilance is an effective way to begin the process of change. O 43087

Melymuka is a Computerworld contributing writer. She can be contacted at kmelymuka@yahoo.com.

This is the latest in a series of mor tions with Harvard Business Review auti on topics of interest to IT managers.



Unintended

Research shows that well-meaning managers aren't quite as unbiased and ethical as they think they are.



As an IT manager. you may not be as ethical as you think you are, says Matgarin R. Banaji, a professor of social ethics at Harward University. In the December

issue of Harvard Business Review. the and co-authors May II Barerman and Dolly Churk

write that most managers are burdened with unconscious biases that often result in unintentionally unethical decisions. Banaji discussed these biases with Kathleen Melymuka and offered surpressions for minimizing their impact

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Eli Lilly Promotes IT Executives

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Gartner Inc. plans to cut about 200 of its 3,800 global workforce in areas of consulting that the re-and advisory firm sees as ing in turn, Gartner plans to hiro 50 people for positions in outsourch ed to the involle in the fourth and

BARBARA GOMOLSKI

Taming the Wild, Wild West

URING THE PAST FEW YEARS, the economic downturn has forced IT departments to look closely at costs and efficiency. Now, the economic recovery is casting another spotlight on IT, and this one is focused on prioritizing IT investments. As organizations slowly boost their investments in new applications, it's clear that many companies need to reconsider the way they set IT priorities. Simply put, it's still the Wild. Wild West in many organizations when it comes to allocating IT

PRODURGOS

Most companies have already learned the band way that the IT organization shouldn't - by itself - determine which new IT initiatives get tabled and which get started. However, there's still a lot of confusion about how IT priorities should be set who gets to vote and how those votes should be tallied. This issue will become even more visible as companies begin to increase their discretionary IT investments in the

A lot of organizations have steering committees that include C-level executives. However, these groups are really in a position to weigh only corporatewide IT initiatives, and even a highly functioning IT steering committee can't bear the total burden of

prioritizing all IT investments. There is no right or wrong way to determine where to put new IT dollars. Sometimes IT oriorities are driven by technology life cycles and business developments. For example, if an unreliable legacy system is costing the company millions, chances are it'll be a top candidate for replacement. Or, if your company buys a comnetitor, you can bet that much of your company's discretionary IT spending will be tied up in the effort to integrate systems

It gets trickier, however, when a company is chugging along with no obvious IT priorities. In this case (and particularly after several wears of little or no impact. ment in new IT initiatives). business units will come up with creative ways to consume IT dollars, Indeed. many companies will face a

flood of new IT proposals in 2004, as IT-starved business managers seek to meet their objectives using technology. So, if it comes down to enhancing the CRM system or Web-enabling the supply chain, which do you do?

IT priorities vary from company to company, of course, but best practices for choosing them are more consistent across businesses. Firms that are mod at picking IT priorities play by the fol-

lowing ground rules: · Acknowledge that the IT organization the business units and the finance depart-To generate the bestown at the team team group hrings unique knowledge to the

forities. IT investment decisions can't be thoroughly weighed unless all three parties are represented, because each

decision-making process. The finance folks are in the best position to weigh the financial assumptions in the project plans. The business unit heads are the most familiar with the business processes and how the application of IT can improve those processes. IT. of course, is in the best position to judge the feasibility of using IT to accomplish the business goal

Evakuate IT priorities using a standard set of criteria. Whether you choose net present value, return on investment

or some other financial payback calculation, do it consistently across all proposed projects. Continue the standardization by weighing IT priorities against a common set of business objectives.

Recognize that tools won't fix bad

processes. There's a hot class of software, called application portfolio management, that can automate the tracking of IT priorities. While many of these packages have rich features and good underlying methodologies, the tools woo't cure bad decisioo-making processes. Put another way, if your company is dysfunctional when it comes to setting IT priorities, an application portfolio management

tool won't fix that. If Understand that there will always be exceptions to the rule. In spite of companies' best efforts to come up with an equitable and logical way to prioritize IT investments, the world remains an

unfair place. Certain groups and key individuals will carry more clout and will swoop in and hijack IT resources, even if their projects aren't first on the list of corporate IT priorities. That's never going to change. The goal is to make that kind of situation the exception and not the rule. O 42986

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Continued from page 1 E-voting

state of Ohio (Onickt in) a3860] as a "very positive report," according to company Chairman David Hart. He said it will be easy to implement the changes called for.

Similarly Seguoia spokesman Alfle Charles said that his company's system screed well in the same Ohio review and that Sequoia has made many of the recommended changes We'll do whatever officials

require us to do," Charles said. Neither Diebold oor Flootion Systems made representatives available for comment.

Industry Members Unite

Meanwhile, six vendors those four plus Advanced Voting Solutions Inc. and Unilect Corp. - last week responded to the controversy by banding together to form an organization called the Election Techpology Council, which will address ethics and security practices, among other issues

[QuickLink 43463] "We came together because our environment has become chaotic," said Hart, "We need to be able to speak as an industry in a single voice on the areas being regulated... We want to be part of the debate and tell our industry's side of the story. There's a lot of mis-

information." Still, many IT professionals engaged in the e-voting issue are troubled by the limits of

computer systems' reliability. Seattle software developer Erik Nils-

son's experience writing database code in the historic 1994 South African election made him feel "like a small cog in an overwhelming and complex proc-

ess," he said. Techpologists have to gain an understanding of the difficulty of running elections if they are to contribute to solving software security and quality problems, he said, because "there aren't very many coders who understand elections and not very many elections people who

understand code." Nilsson, who chairs the Competer Professionals for Social Responsibility working group on voting, is scathing on the subject of poor software quality in DRFs. The lack of improvements to computer security since he became involved with it in 1987 has led

..... There aren't 7 very many coders who understand elections and not very many elections people who understand code.

FRIK NU STON SOFTWARE DEVELOPER

.....

him to conclude that for the time being. paper - that is an audit trail outside of self-contained DRE competers - is still needed for safe elec-

NFWS

Brit Williams hour to differ. The compater science professor at Kennesaw

State University in Georgia is often on the opposite side of the arrument from e-voting skeptics, but even his opponents credit him with running, for the state of Georgia, what may be the most thorough voting machine inspection regime in the country. While Georgia's rigorous tests have discovered unreliable units before they could be used at the polls, Williams said he trusts the machines as

far as is necessary within a total security framework. "People are looking at the security of electronic voting machines from a purely technical point of view but securitv is a combination of physi-

cal, legal and procedural measures," said Williams. He said a paper audit trail isn't needed and would introduce logistical problems.

David Dill, a computer science professor at Stanford University in Palo Alto, Calif., is a recent arrival to the electronic voting discussion: He said that prior to language 2003. he wasn't deeply involved in any policy debates. But show a year ago, "it occurred to me that people were buying these machines, and nobody was

minding the store." Dill said In addition to working to rally other technologists to his point of view via a Web site fOuickLink a38501. Dill got involved locally, in Santa Clara County, when he heard about lanned purchases of DRFs. He credits that controversy with raising the alert and leading to a recent victory for his group: Late last month, Califormia's secretary of state is-

sued a mandate calling for voter-verifiable paper systems to be added to all polling units statewide

Ted Selker, an associate professor at MIT's Media Lab nerofesses to be "as uneried as the next guy about security." But be maintains that verification can be provided without paper. and be has developed what he claims is a secure votion architecture that uses multiple redundant software components. Selker said IT professionals need to get involved locally but he wants to broaden the conversation to include how

technology can improve other parts of the electoral process such as voter registration.

"In 2000, between 1 and 3 millioo votes were lost in revistration database problems," he said, "It's the ton place votes get lost, and we're not focused on this." @ 43521

Heichler is editor in chief of the IDC News Service

REHIND THE BALLOTING The new National Committee on Voting interests cells for a voting paper auch train OwiekLink 43083

IT Pros Encouraged to Get Involved

Regardless of their positions on the electronic voting issue, virtu-ally all involved in the debate say IT professionals can, and should

"Most IT people get it right vey - we know how Insecus machines are "said Redoors S mons, a retired IBM rese and past president of the Association for Computing Machinery in New York, That's why Simons wants IT professionals find out les - decisions on voting systerns are made statewide in some

es but occur at the township level in others Seliver would also like to see more inclinalogists get involved as concerned citizens in their local jurisdictions. "We need IT promais to volunteer to learn out elections and help local action officials," he said. "IT professionals understand the im-portance and difficulty of making

sesses that do what you want hom to do Getting to know local election officials and gaining an under-standing of their problems will give IT people credibility in the bate, according to Erik Nil Computer Professionals to nois fo

elections, vour concerns will be better formed and consequent better received," he said, "Computer people learning something about elections, and maybe helping election people understand that they might have some larged edge gaps about computers, is a good thing."

Rebecca Mercur, whose no has become associated with voter verifiable paper - sha's widely lenown for her Mercuri Method of including a paper audit trail within a DRE satus - corners by her election credentals bonustly. She has been grapping with the itsus of voting since she was a software eloper-cam-local committee inter in Bucks County, Pa., in

1969 And the still wreter at the polls on election day, she said. "This is what people can do Go and be at the places where they are rolling out the new mothe million eyes of iT pro als out there, we can find out more about these systems and

can start to flag shall? "Lock into R, debate it and come to your own conclusion," supports Stanford University's David Dill. "Be opinion leaders in this question. This is going to have to be lought county by

EDANK HAVES . EDANKIV SPEAKING

Not So Naughty

ANTA FROWNED at the computer screen. "Naughty," he said, "Naughty, Naughty, Naughty, Naughty, I thought this spam filter was supposed to sort out the naughty e-mails from the nice ones. But these all seem to be naughty. And why would I want to add three inches? I've been trying to take inches off for years,"

"Look, boss," said the elf standing next to Santa's desk with a red and green eyeshade and a clipboard, "I don't want to be pushy, but you've got every spam cannon on the Internet aimed at you. You

need to start leaning on the Delete key or you'll oever be ready by the big night. Heck, a week and a half out, you haveo't eyeo decided what

to give everybody in the IT business." "I suppose you're right," Santa sighed. "What can we give Bill Gates, the man who has every-

thing? I guess he's not one for Bratz dolls or Car "I beard he put half the audience to sleep at Comdex this year," said the elf. "Maybe some

iava would have belied. No wait Microsoft is cetting rid of that, right?" "Ho-ho," said Santa. "How about a remote-

control mini race car? It says here it's the hot gift this year. Though I thought it was the hot eift last year "Focus, boos, focus," the elf said, "What about Sun's Scott McNealy? He's taking oo Microsoft

on the desktop." "Yes, he's trying to get his Java Desktop Systerm onto PC's at Wal-Mort " said Santa "And Michael Dell has opened kiosks at big shopping malls. Some big Web-shopping boosters they are. How about some bricks and mortar for

each of them? "Or maybe just a brick," muttered the elf. "Larry Ellison is next. He really wanted People-Soft this wear."

"Last year, be wanted the America's Cup," said Santa, "He never gets what he wants. Let's give him copies of Softwar and Everyone Else Must Fail and The Difference Between God and Larry Ellison. They're all about his favorite subject. Next?

"Hasso Plattner," said the elf. "He retired this year as top guy at SAP. He used to get up on stage with showpirls at SAP conferences. didn't he? Let's give him some new dancing shoes."

"Done," Santa said. "And who are

those gues at Novell who engineered that deal to get into the Linux business? If you knew SUSE like I know SUSE"

ed by the Nachi worm."

"Messman and Stone," the elf said. "That does sound like a vandeville act, doesn't it? Better give them reading glasses, so they can catch all the fine print in the lawsuit The SCO Group will throw at them. And should we give SCO's

Darl McBride a lump of coal?" "It looks like the lawyers from IBM and Red Hat are already beaning the coals on him." said Santa. "But we can give some lumps to Nicholas Carr, that self-promoter wbo wrote 'IT' Doesn't Matter.' And to the Department of Homeland Security which just out on F on its own security report card. And to Diebold, the automated teller machine vendor whose ATMs got infect-

"But what about all the good IT people who speot the year dealing with new regulations and offshoring and endless natches?" asked the elf. "Maybe they could use some brand-name pharmaceuticals at 70% off."

"Now who can't get his mind off junk e-mail?" said Santa, "Besides, the best present I could give them would be to do something about all the spam they spend so much time fighting and maybe give snammers a load of their own.... "Boss, I doo't like that look

you've got," the elf said oeryously. "I've got it!" said Santa with a none-too-jolly twinkle in his eye. "Load that old circus cannoo oo my sleigh, and call Hormel for some ammunition. I'm the one persoo who knows for sure wbo's naughty and nice. And if spammers want to aim snam cannons at us. I know just the spiced-meat product to fire down their chimneys. Hohouhoff O 43486



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